

SCHUYLER COUNTY HAZARD MITIGATION PLAN 2021-2026



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PLAN ADOPTION

Adoption by local governments demonstrates each community's commitment to implementing the mitigation strategy and authorizes responsible parties to execute their actions. The final plan is not approved until communities adopt the plan and FEMA receives documentation of formal adoption by the governing body of each jurisdiction in this multi-jurisdiction plan. Adoption by town and village boards can be accomplished through a formal resolution or other forms acceptable by law.

A copy of the formal documented adoption of each jurisdiction within Schuyler County MUST be submitted to the Schuyler County Director of Emergency Services for submission to the New York State Division of Homeland Security and Emergency Services as well as FEMA.

The following log shall be used to track approval dates of each entity in the master copy of this plan, which shall reside with the Schuyler County Director of Emergency Services.

Approval/Adoption Log for 2021-2026 Schuyler County Hazard Mitigation Plan

ENTITY	DATE
FEMA (tentative)	
Schuyler County	
FEMA (final)	
Town of Catharine	
Town of Cayuta	
Town of Dix	
Town of Hector	
Town of Montour	
Town of Orange	
Town of Reading	
Town of Tyrone	
Village of Burdett	
Village of Montour Falls	
Village of Odessa	

| INTRODUCTION |

Hazard mitigation planning helps a community identify and prioritize actions it can take to reduce or eliminate risks to people and property from natural and human-caused hazards. The Federal Emergency Management Agency [FEMA] further describes hazard mitigation planning as a process that state and local governments should use to identify community risks and vulnerabilities associated with known hazards, to better plan for, withstand, and recover from disaster events.

PURPOSE

The purpose of this hazard mitigation plan is to identify and plan for both natural and human-caused hazards facing Schuyler County and to develop strategies to reduce long-term risks. Hazards cannot be eliminated, but it is possible to determine those hazards that are mostly likely to occur, where their impacts may be most severe and cause the most damage, and what can be done to reduce their impacts on the community. Benefits of hazard mitigation planning include:

- Increased public awareness of natural and human-caused hazards and community vulnerabilities,
- Improved understanding of potential risks and possible risk reduction measures associated with existing and future development,
- Strengthened partnerships and lines of communication among diverse interests, including opportunities to leverage and share resources,
- Increased community and voter support for specific actions the County, towns, and villages may propose to reduce future losses,
- A reduction in physical, financial, and emotional losses caused by natural and human-caused disasters,
- Increased community resilience to withstand and more quickly recover from disasters, and
- Community eligibility for federal hazard mitigation grants and aid prior to and following federally-declared disasters, and for additional state matching funds for associated repairs and improvements.

SCOPE

This multi-jurisdictional plan encompasses Schuyler County within the State of New York and the following municipalities:

Town of Catharine
Town of Cayuta
Town of Dix
Town of Hector

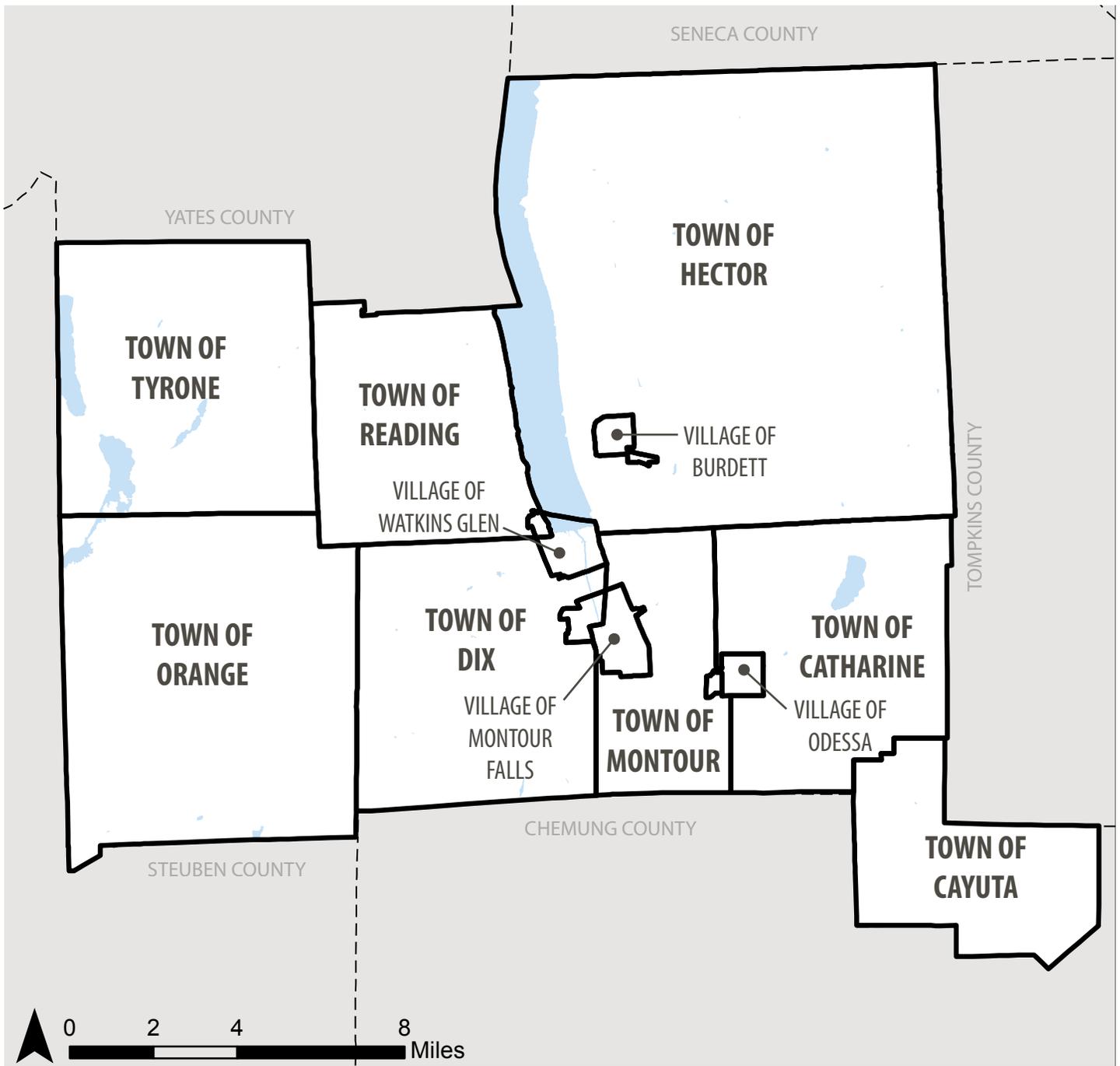
Town of Montour
Town of Orange
Town of Reading
Town of Tyrone

Village of Burdett
Village of Montour Falls
Village of Odessa
Village of Watkins Glen

This hazard mitigation plan addresses all identified hazards, both natural and human-caused which could impact Schuyler County. A map of Schuyler County and its municipalities is provided in Figure 1.

| INTRODUCTION |

FIGURE 1: Schuyler County - Municipality Map



| INTRODUCTION |

PLANNING PROCESS

The previous Schuyler County Hazard Mitigation Plan was approved by FEMA in June of 2016. That plan will expire on June of 2021. In addition to the federal declaration for Hurricane Sandy, which had no impact in Schuyler County, there have been several incidents since the authoring of the last plan which impacted Schuyler County and local municipalities but did not result in federal disaster declarations. These included:

- May 2017 a severe thunderstorm developed over the area of Alpine winds snapped and uprooted several trees and produced quarter-sized hail.
- July 2017 Flash flooding spilled across several streets in the Village of Watkins Glen and nearby county roads which damaged roads. There was a report of 2 feet of water in one intersection.
- August 2018 heavy rain causing damaging floods in the Town of Hector. Several roads and homes were damaged, with people trapped in homes.
- July 2019 a thunderstorm caused a lightning strike to hit the Cayuga Loop in the Watkins Glen State Park Campground resulting in two minor injuries to campers.

These incidents underscore the need for continued hazard mitigation against flooding, which is the county's top-rated hazard.

The Disaster Mitigation Act of 2000 [DMA 2000] [P.L. 106-390]2 provides an opportunity for states, territories, tribes, and local governments to take a new and revitalized approach to mitigation planning. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act [the Act] by repealing the previous Mitigation Planning section [409] and replacing it with a new Mitigation Planning section [322]. This new section emphasizes the need for state, territorial, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. It continues the requirement for a state mitigation plan as a condition of disaster assistance, and creates incentives for increased coordination and integration of mitigation activities at the State level.

To implement the DMA 2000 planning requirements, FEMA published an Interim Final Rule [the Rule] in the Federal Register on February 26, 2002. This Rule [44 CFR Part 201] established the mitigation planning requirements for states, tribes, and local governments.

FEMA in 2013, under a new "National Mitigation Framework", has also issued updated guidance for local hazard mitigation planning. This framework has a focus on strengthening community "resilience" – to not only understand and reduce risks of future events, but to also empower communities to recover more quickly and effectively when disasters occur.

Work to update the Schuyler County Hazard Mitigation Plan began in early 2019 led by the staff of the Schuyler County Emergency Management Office, and Schuyler County Planning Department.

The process followed in developing this plan update has been as important as the plan itself, by actively seeking input from the local jurisdictions within the county as well as the public to identify hazards and community vulnerabilities, and local actions to be taken to reduce and mitigate known hazards. The four parts of the planning process included:

- **Risk Assessment** – to estimate the potential frequency and magnitude of hazard events, and to identify and plan for the most probable hazards and their potential impacts on both the built environment and the local community.
- **Mitigation Strategies** – to develop goals, objectives and strategies aimed at mitigating future disaster losses, which are cost-effective, technically feasible, and environmentally sound – and timed to allow for strategic investment of scarce resources.
- **Public Involvement** – to receive and consider community input from diverse stakeholders.
- **Implementation and Monitoring** – to identify, assign and schedule priority implementation tasks, and to monitor their progress over time.

This plan reflects local priorities for hazard mitigation, as determined from the community planning process, and best available federal, state and local information. Action items are included to monitor the success or effectiveness of implementation and results, and to inform the next update of the plan.

| INTRODUCTION |

STAKEHOLDER ENGAGEMENT

The plan update began with the engagement of several pre-existing committees and groups of stakeholders for their input to the planning process with additional input sought through surveys. Participating groups included:

Schuyler County Council of Governments [07/21/21]:

The Council of Governments is an association of municipal governments and school districts whose mission is to provide a forum for discussion and negotiation leading to agreements for increased efficiency, fiscal responsibility, and improved quality of government services. During the meeting of Schuyler County Council of Governments the planning process was explained. Following the discussion, interest was expressed by municipalities to participate in the ongoing planning process. Council of Governments meeting dates are posted on the Schuyler County website. Further information on the Council of Governments, including their bylaws, can be found at <http://www.schuylercounty.us/257/Council-of-Governments>.

Attendees of this public meeting included:

NAME	TITLE	AGENCY
Brandon Theetge	Supervisor	Town of Cayuta
Alvin White	Supervisor	Town of Hector
David Scott	Supervisor	Town of Montour
Joanne Randall	Supervisor	Town of Orange
Stephen Miller	Supervisor	Town of Reading
Donald Desrochers	Supervisor	Town of Tyrone
James Ryan	Mayor	Village of Montour Falls
Luke Leszyk	Mayor	Village of Watkins Glen
Kai D'Alleva	Superintendent	Watkins Glen Central School District
Judy Cherry	Executive Director	Schuyler County Partnership for Economic Development [SCOPED]
J.F Winkler, MD	Doctor	Health Officer
Michael Hardy	Executive Director	Watkins Glen Area Chamber of Commerce
Carl H. Blowers	Chairman	Schuyler County Legislature
Tim O'Hearn	County Administrator	Schuyler County
Fonda Chronis	Deputy County Administrator	Schuyler County
Bill Kennedy	Emergency Management Coordinator	Schuyler County

Schuyler County Local Emergency Planning Committee [LEPC] [03/17/22@ 10am]:

Schuyler County LEPC has worked to transition to be an All-Hazard Committee and therefore has become the primary committee to collect data and review the ongoing Hazard Mitigation Plan. The committee meets quarterly at which time the Hazard Mitigation Plan has been a constant topic on the agenda. This group brings together a broad cross section of the community participants.

Attendees of this public meeting included:

| INTRODUCTION |

NAME	TITLE	AGENCY
Kirk Smith	Director	Schuyler County Emergency Services
Lora Dewey	Health and Safety Hygienist	GST BOCES
Brain Gardner	Security Manager	Watkins Glen International
Emily Warfle	Emergency Preparedness Coordinator	Schuyler County, Public Health
Bill Kennedy	Coordinator	Schuyler County Emergency Management
Fonda Chronis	Administrator	Schuyler County
Nancy King	Acting/Interim Director	Schuyler County, Public Health
Tom Smith	Emergency Manager	Schuyler Hospital
Pat Fernan	Asst. Emergency Manager	Schuyler Hospital
Maria Hidalgo	Environmental, Health, and Safety Specialist II	Cargill Inc
Michael Stamp	Member/President	WGFD/ EC Cooper
Kristin VanHorn	Director	Schuyler County, Planning
Brian Bernard	Sergeant, Traffic	NYSP
Timothy Alimossy	Emergency Manager, Region 6	NYS DOT

Schuyler County Water Coordinating Committee [WQCC] [03/17/22 @ 1pm]:

The purpose of the Water Quality Coordinating Committee is to, act as a forum for discussion of water quality concerns in Schuyler County. It provides an avenue of opportunity where specific water quality problems can be discussed and potential solutions found. Generate interest in and pursue funding to attack specific water quality problems in the county and educate the public about watershed management and its importance for maintaining high water quality in the future.

Committee members include, state, regional, county, and local entities. The WQCC are key stakeholders in both identifying and prioritizing mitigation strategies and projects. These meetings are advertised on the Schuyler County website, with meeting reminders sent directly to members. All meetings are open to the public. Additional information on the WQCC can be found at <https://www.stcplanning.org/technical-assistance/schuyler-county-water-quality-coordinating-committee/>.

Attendees of this public meeting included:

NAME	TITLE	AGENCY
Elaine Dalrymple	Educator	Schuyler County Soil and Water
Kristin VanHorn	Director of Planning	Schuyler County Planning
Bill Kennedy	Emergency Coordinator	Schuyler County Emergency Management
Kirk Smith	Deputy Emergency Coordinator	Schuyler County Emergency Management
Carl Blowers	Chairman	Schuyler County Legislature
Roxanne Leyes	Director	Montour Falls Library
Bill Fern	President	Cayuta Lake Association

| INTRODUCTION |

Schuyler County Emergency Services Meeting [03/17/22 @ 6pm]:

A meeting of Emergency Services responders including Emergency Management, Schuyler County's nine fire departments, Fire Coordinators Office, and Schuyler County Volunteer Ambulance Association. Meetings often include representatives of NYS DHSES, NYS OEM, NYS OFPC, and NYS DOH/EMS.

This group of first responders often plays a key role in the response and mitigation of incidents, yet they are often overlooked during the planning process to provide input in the mitigation process. During the meeting the Hazard Mitigation planning process was explained to the group with the intent to engage them in the planning process as key stakeholders. These meetings are advertised on the Schuyler County EMO website with meeting reminders sent directly to members and other invitees. Information on this committee can be found at <http://www.schuylercounty.us/133/Emergency-Services>.

Attendees of this public meeting included:

NAME	TITLE	AGENCY
Kirk Smith	Director	Schuyler County Emergency Services
Keith Caslin	Deputy Coordinator	Schuyler County Emergency Services
Phil Barnes	Legislator	Schuyler County Legislature
Adam Mahnke	Fire Chief	Odessa Fire Department
Billy Thomas	Line Officer	Montour Falls Fire Department
Cory Glover	Line Officer	Burdett Fire Department
Bill Kennedy	Coordinator	Schuyler County Emergency Management
Rick Churches	Volunteer Deputy Coordinator	Schuyler County Emergency Management
Steve Williams	Line Officer	Valois, Logan, Hector Fire Department
Jason Kelly	Fire Chief	Burdett Fire Department
Kent Thurston	Fire Chief	Beaver Dams Fire Department
Errick Barber	Line Officer	Monterey Fire Department

Schuyler County Public Works Meeting [04/05/22]:

A meeting of a group of Town, Village, and County Highway superintendents, as well as State DOT representatives. The meeting was held to outline the planning process and seek input from this group of stakeholders. These meetings are advertised on the Schuyler County website with meeting reminders sent directly to members and other invitees. All meetings are open to the public. Agendas and minutes can be found at <http://www.schuylercounty.us/DocumentCenter/Index/197>.

Attendees of this public meeting included:

NAME	TITLE	AGENCY
Marty Vondracek	Highway Superintendent	Town of Catharine
Matt Stiles	Highway Superintendent	Town of Tyrone
Terry Wilcox	Superintendent of Utilities	Village of Watkins Glen
Dana Bailey	Highway Superintendent	Town of Montour
Jason Switzer	Highway Superintendent	Town of Reading
Scott Yaw	Highway Superintendent	Town of Dix
Randy Rappleye	Highway Superintendent	Town of Hector
Ken Thurston	Highway Superintendent	Schuyler County

| INTRODUCTION |

MUNICIPAL INVOLVEMENT

Each municipality in the County participated in the development of this plan through representation at many of the previously mentioned meetings as well as other means of input.

- **Town of Catharine:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Cayuta:** provided information for mitigation plan, participates in Council of Governments Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Dix:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Hector:** provided information for mitigation plan, participates in Council of Governments Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Montour:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Orange:** provided information for mitigation plan, participates in Council of Governments Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Reading:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Town of Tyrone:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.
- **Village of Burdett:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting.
- **Village of Montour Falls:** provided information for mitigation plan, participates in Council of Governments Works Hazard Mitigation meeting.
- **Village of Odessa:** provided information for flood mitigation plan, participates in Hazard Mitigation Committee.
- **Village of Watkins Glen:** provided information for mitigation plan, participates in Council of Governments, and Public Works Hazard Mitigation meeting. An in-person interview was conducted with the Highway Superintendent to identify hazards of concern, repetitive loss areas, mitigation priorities, and mitigation projects.

Information obtained from municipalities is incorporated throughout the plan.

NEIGHBORING JURISDICTIONS

The emergency managers of the neighboring counties of Chemung, Seneca, Steuben, Tompkins, and Yates contacted by email and asked to provide responses to identify hazards from within their counties which they felt could threaten Schuyler County, hazards from within Schuyler County which they felt could threaten their own, and regional hazard mitigation projects which would aid in reducing the impact of hazards. Each neighboring county indicated that they did not have anything listed or referred to within their multi jurisdictional plans that would impact Schuyler County.

PUBLIC ENGAGEMENT

Most meetings throughout the planning process were open public meetings, typically advertised through the Schuyler County website and with bulletin board postings in county and local office buildings. While citizens chose to have little direct engagement in the process, the needs of the public were addressed through their local and county elected and appointed officials, which provided representation at each meeting. Further, certain not for profits, property owners associations, and private entities were also directly involved in the process, as identified through meeting attendance.

| INTRODUCTION |

The Public Engagement process is being conducted concurrently with the 1st Draft review by DHSES and FEMA. The public comment period occurred from May 17th - June 8th. This comment period was advertised through the following sources:

Schuyler County Homepage	Odessa File
Schuyler County Emergency Management Homepage	Pembrook Pines Media Group
Schuyler County Emergency Management Facebook	Star Gazette
Schuyler County Emergency Management Twitter	The Watkins Glen Review & Express
Via email to the Schuyler County Legislature	The Observer Review
Channel 5 [local public access]	WENY [ABC]
The Corning Leader	WETM [NBC]
Daily News/Hi-Lites	WFLR Radio
Elmira-Corning YNN	Ithaca Journal
Finger Lakes Times	Ithaca Times
Haefele TV Calendar	

No comments were received from the public during the public comment period. The Draft plan remained on the County website [<http://www.schuylercounty.us/DocumentCenter/View/11410/DRAFT-Schuyler-County-Hazard-Mitigation-Plan-May2022>] after the public comment period ended and no additional comments have been received.

DATA AND INFORMATION

Information for this plan was obtained from a variety of sources including:

- Schuyler County Planning Department and the Schuyler County Countywide Comprehensive Plan [2014]
- New York State Hazard Mitigation Plan [2014 & 2019]
- FEMA Flood Insurance Rate Maps and Flood Insurance Studies
- Schuyler County Hazard Mitigation Plan [2016]
- Schuyler County Flood Mitigation Action Plan [1999]
- Schuyler County Comprehensive Emergency Management Plan [2014]
- Schuyler County Real Property Tax Data [2021]
- NOAA National Climatic Data Center – Storm Event Database
- US Census Bureau
- US Centers for Disease Control and Prevention

Information and data sources are cited throughout the document.

INTEGRATION INTO COUNTY-WIDE DECISION-MAKING

The current Schuyler County Comprehensive Emergency Management Plan [CEMP], Schuyler County Hazardous Materials Plan, and Schuyler County Countywide Comprehensive Plan helped inform development of this plan. Once adopted and approved, this plan will then be incorporated into the next iterations of related County, town, and village plans and programs. The implementation program includes recommended strategies to update County, town, and village infrastructure standards, flood hazard regulations, and related development review standards under County, town, and village zoning. Schuyler County’s professional staff will work collaboratively with County, town, and village boards; community organizations, and regional and state officials to implement this plan. New York State, however, is a home rule state and as such local adoption of this plan and integration into other local efforts is at the discretion of local governing bodies.

The Schuyler County Hazard Mitigation Plan will be submitted to the Schuyler County legislature and each municipality for adoption after preliminary approval by FEMA.

| COMMUNITY PROFILE |

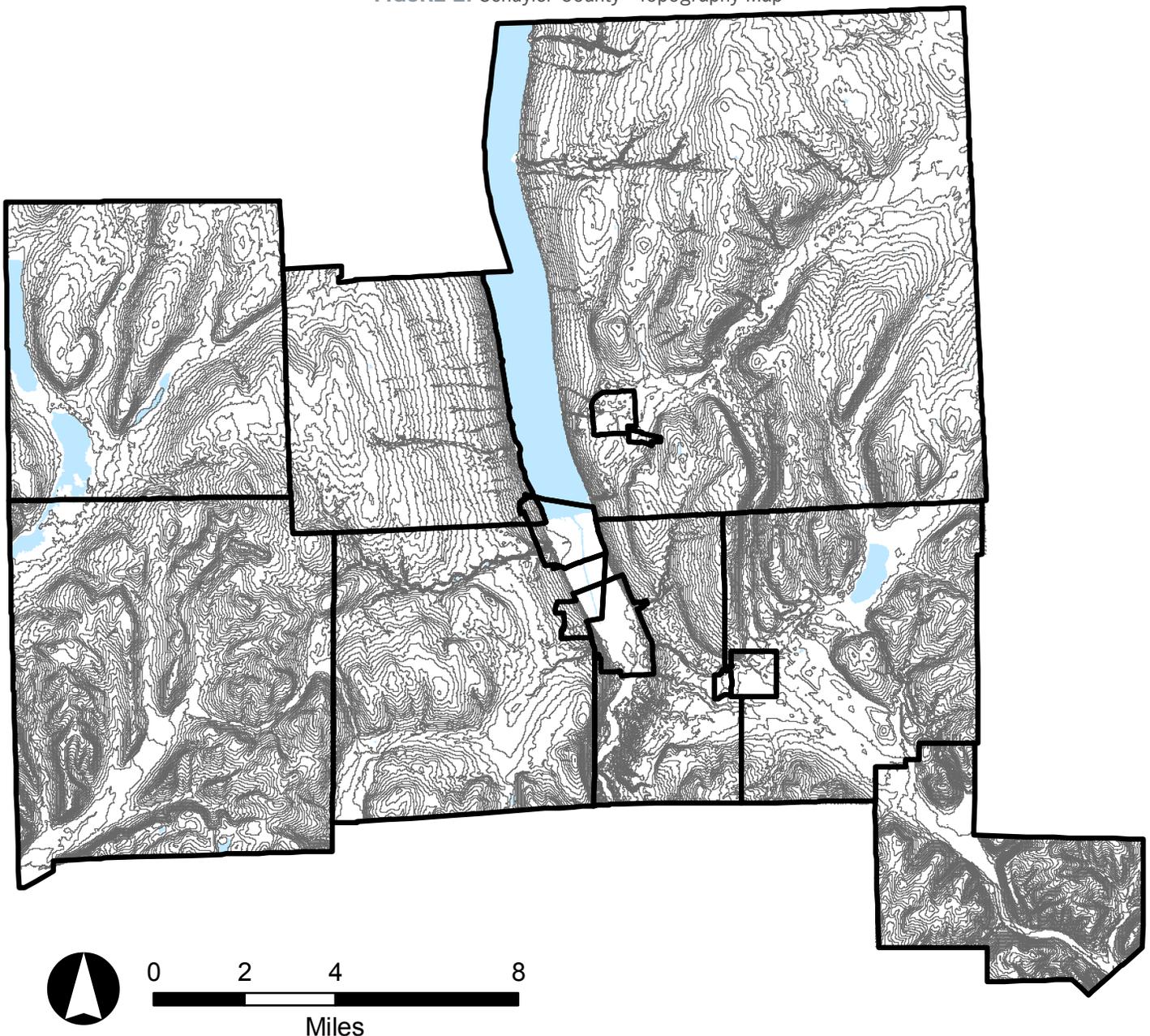
SETTING

Schuyler County is a small rural county located in New York's Finger Lakes Region. Schuyler County's hills, gorges, and marshes comprise the headwaters of Seneca Lake, the largest and deepest of the Finger Lakes. Seneca Lake bisects the northern portion of the county, making latitudinal travel around much of the county difficult.

Schuyler County is one of New York's smallest [328 square miles of land, 14 square miles of water], with one of the lowest populations [US Census, American Community Survey 2019 estimate was 17,920]. The most urban areas of the County are the Villages of Watkins Glen, which is the county seat, and Montour Falls, which are both situated in the Seneca Lake valley.

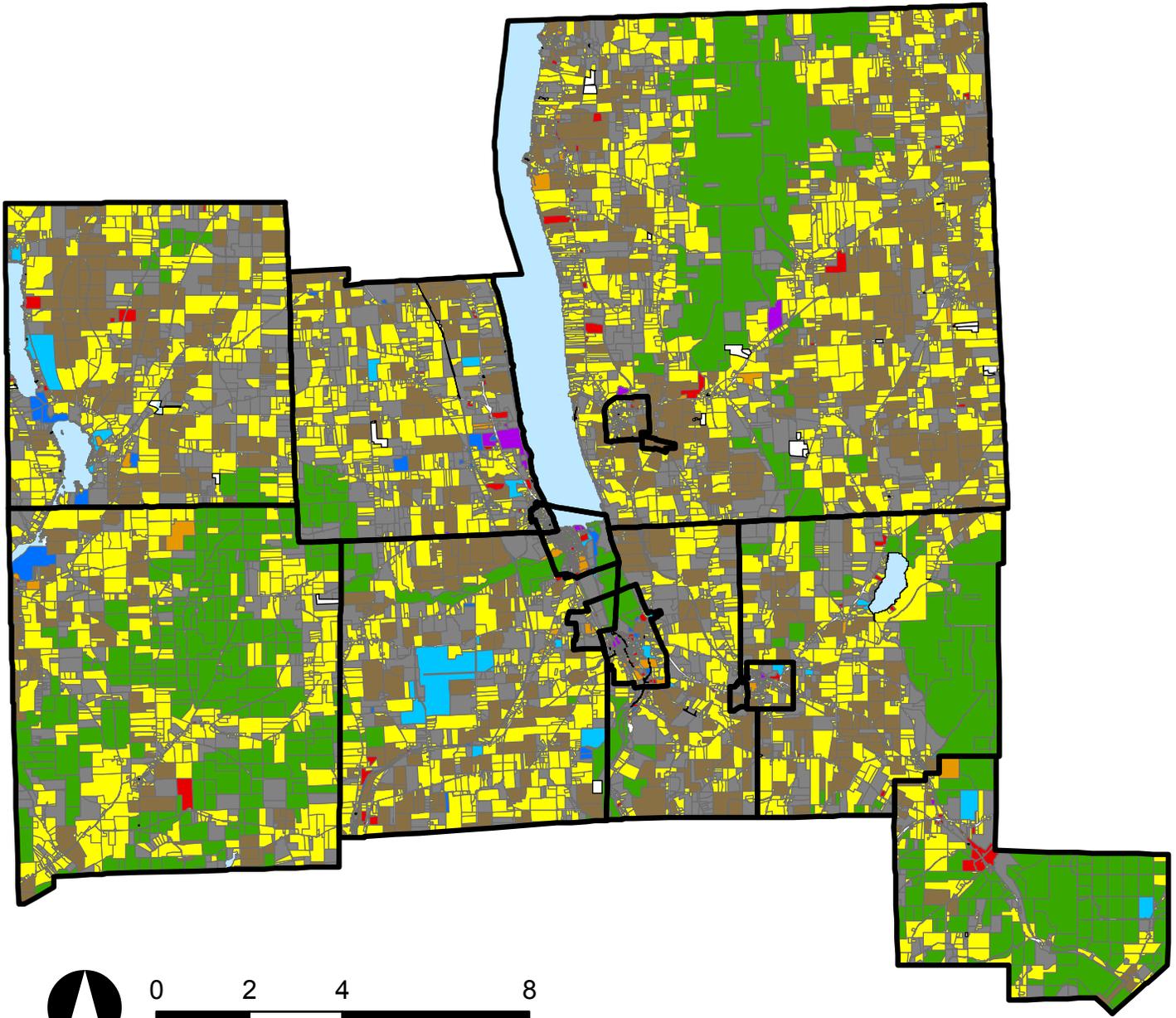
The Finger Lakes region, falling within the central Allegheny Plateau, is very hilly as shown in Figure 2. Schuyler County falls within the Upper Susquehanna River watershed. Primary land uses, as shown in Figure 3, are agricultural, residential, and forested or park land.

FIGURE 2: Schuyler County - Topography Map



| COMMUNITY PROFILE |

FIGURE 3: Schuyler County - Land Uses



0 2 4 8

Miles

- | | |
|--------------------|---|
| Municipal Boundary | Recreation & Entertainment |
| Unknown | Community Services |
| Agriculture | Industrial |
| Residential | Public Services |
| Vacant Land | Wild, Forested, Conservation Lands & Public Parks |
| Commercial | Water Body |

source: Schuyler County Planning Department

| COMMUNITY PROFILE |

Agriculture and tourism are the most significant industries in Schuyler County, with visitors enjoying the county's lakes, wineries, Watkins Glen State Park, the Watkins Glen International Speedway, and other attractions. The county hosts Finger Lakes National Forest, the only National Forest in New York State, as well as three state forest areas.

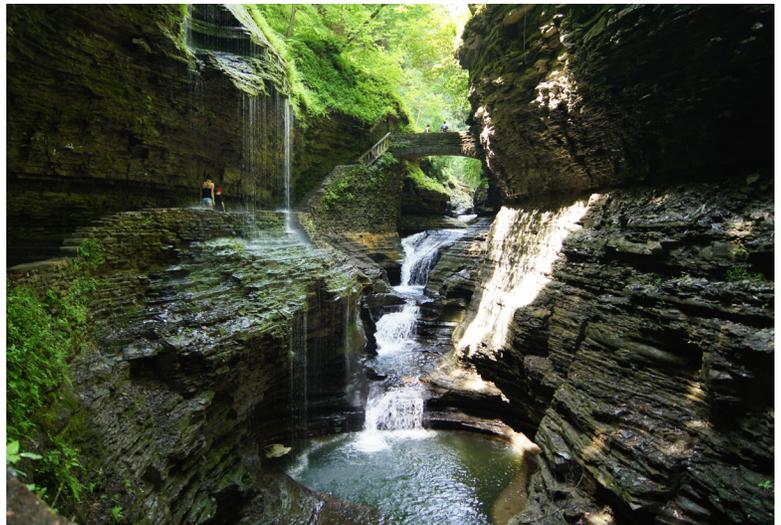
Agricultural areas in Schuyler County consist largely of dairy and produce farms, forestry, and vineyards. Contained within Schuyler County are three agricultural districts, which are designed to promote agricultural activity through incentives and protections. Large production farms are growing in the county, bringing increased revenue, employment, and related activity. Figure 4 identifies the agricultural districts and acreage in Schuyler County.

Tourism draws upward of two million people annually to Schuyler County as people enjoy auto racing; wineries, distilleries, and craft beer breweries; and the wonderful natural resources the County has to offer. Tens of thousands of people attend the Watkins Glen International Speedway each year to watch NASCAR and other automotive races. The Speedway also hosts popular music events drawing thousands of attendees.

Year-round, thousands regularly visit Schuyler County's wineries, distilleries, and craft brewers which are largely situated around Seneca Lake. Large events, such as the Finger Lakes Wine Festival, as well as smaller events draw large crowds many weekends through the year.

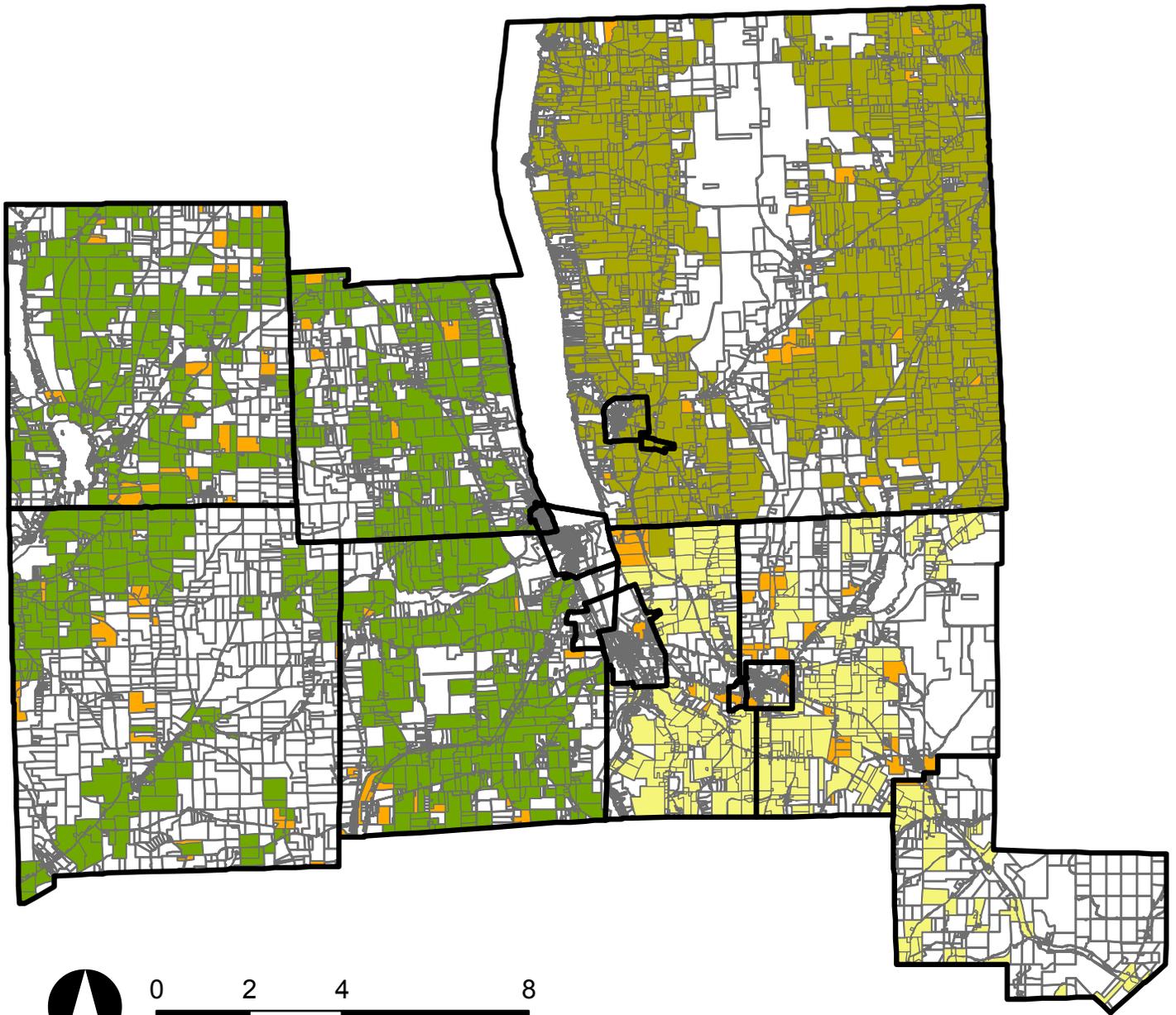
Visitors and residents alike enjoy the vast natural resources Schuyler County has to offer. The Catharine Valley Trail, Finger Lakes Trail, Watkins Glen State Park, and the Finger Lakes National Forest bring visitors year round to camp, hike, bike, cross country ski, and snowshoe. The Watkins Glen State Park, selected in the USA Today 2015 Reader's Choice Poll as the third best state park in the United States, attracted 1,037,138 visitors in 2019. In 2020 during the COVID the park saw 663,402 visitors. Seneca Lake and Cayuta Lake are popular boating and fishing destinations, as are Lamoka and Waneta Lakes in the Town of Tyrone in the north-west of the County. Figure 5 identifies the natural resource areas of Schuyler County.

There are a number of resources available to Schuyler County, its towns and villages, citizens, and other stakeholders. Those resources are reviewed on the following pages, both by broad category as well as by jurisdiction.



| COMMUNITY PROFILE |

FIGURE 4: Schuyler County - Agricultural Districts

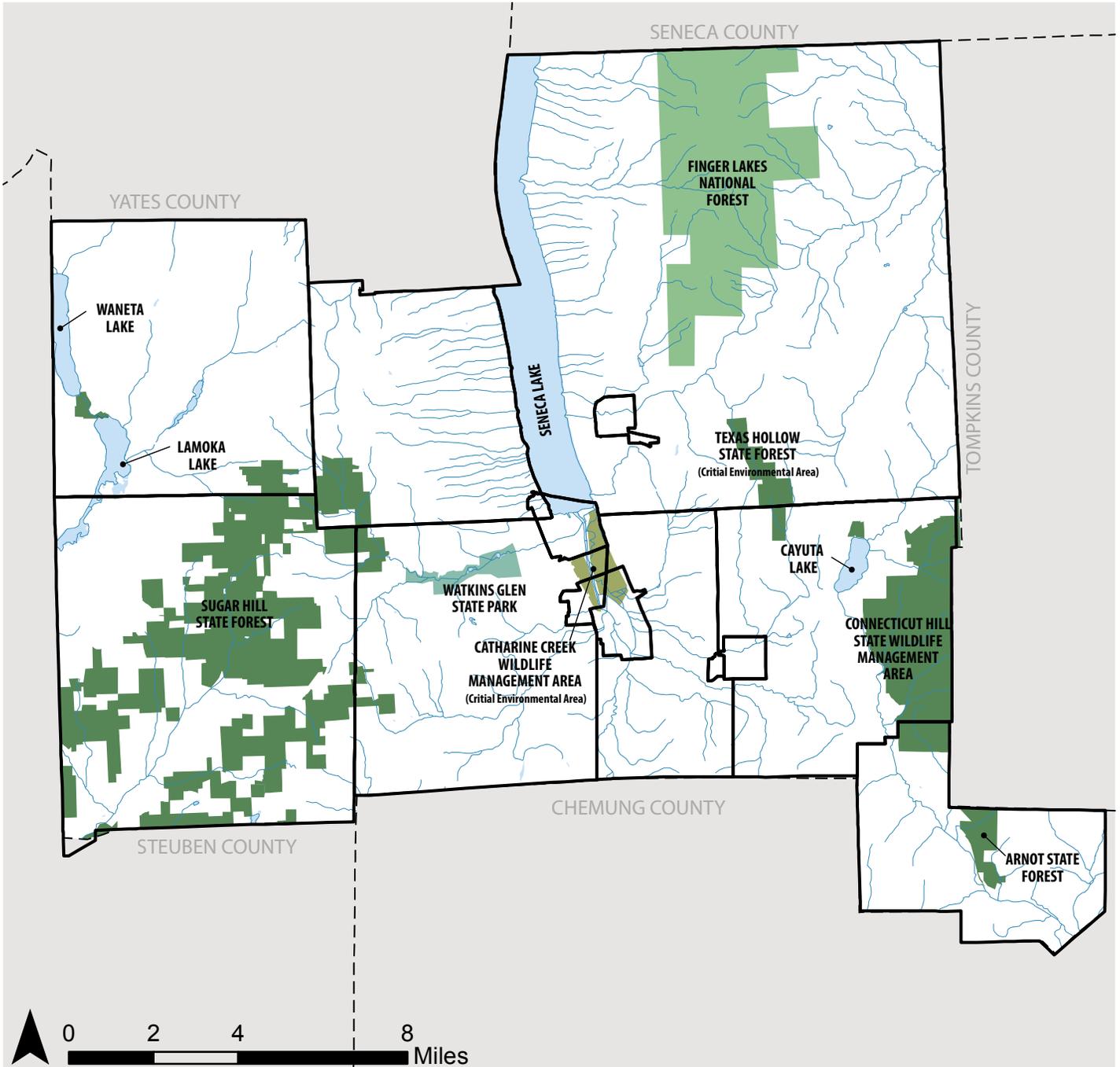


-  Municipal Boundary
-  Ag District #1
-  Ag District #2
-  Ag District #3
-  Agriculture Land Use

source: Schuyler County Planning Department

| COMMUNITY PROFILE |

FIGURE 5: Schuyler County - Natural Resources



- Lakes
- NYS State Park
- Streams
- Marsh/Wetlands
- National Forest
- Municipal Boundary
- NYS Forest

source: Schuyler County Planning Department

| COMMUNITY PROFILE |

PUBLIC SAFETY

EMERGENCY MANAGEMENT



The Schuyler County Emergency Management Office provides emergency management services for Schuyler County in coordination with other county departments. The EMO interfaces regularly with town and village officials and coordinates with state and federal agencies and other stakeholder organizations. The EMO is responsible for maintaining the County Emergency Operations Center and is jointly responsible for the County 911 Center. The Emergency Management Director also serves as the County Fire Coordinator and EMS Coordinator.

LAW ENFORCEMENT

The Schuyler County Sheriff's Office provides most law enforcement services throughout Schuyler County, including road and marine patrol, criminal investigations, county building security, and jailing. With the Emergency Management Office, the Sheriff's Office is jointly responsible for the County 911 center. The 911 center is staffed by the Sheriff's Office and is the public safety answering point for all Schuyler County emergency services, including nine volunteer fire departments, three volunteer ambulance corps, the Sheriff's Office, Watkins Glen Police, and the New York State Police local station.

The Village of Watkins Glen Police Department is the only local jurisdiction police department within Schuyler County. Watkins Glen has the largest population of all local jurisdictions within the County and is generally the hub of the County's tourism.

The New York State Police maintain a station in Montour Falls at the New York State Fire Academy. Together with the Sheriff's Office, the State Police provide law enforcement services to the towns and villages throughout the County which do not have local departments. They also provide assistance to the Village of Watkins Glen as needed.

The New York State Park Police, New York State Department of Environmental Conservation Police, and New York State Department of Environmental Conservation Forest Rangers all maintain a regular presence in Schuyler County. As such they often respond to incidents and provide assistance as requested.

FIRE SERVICE

The following volunteer fire departments provide fire protection services within Schuyler County:

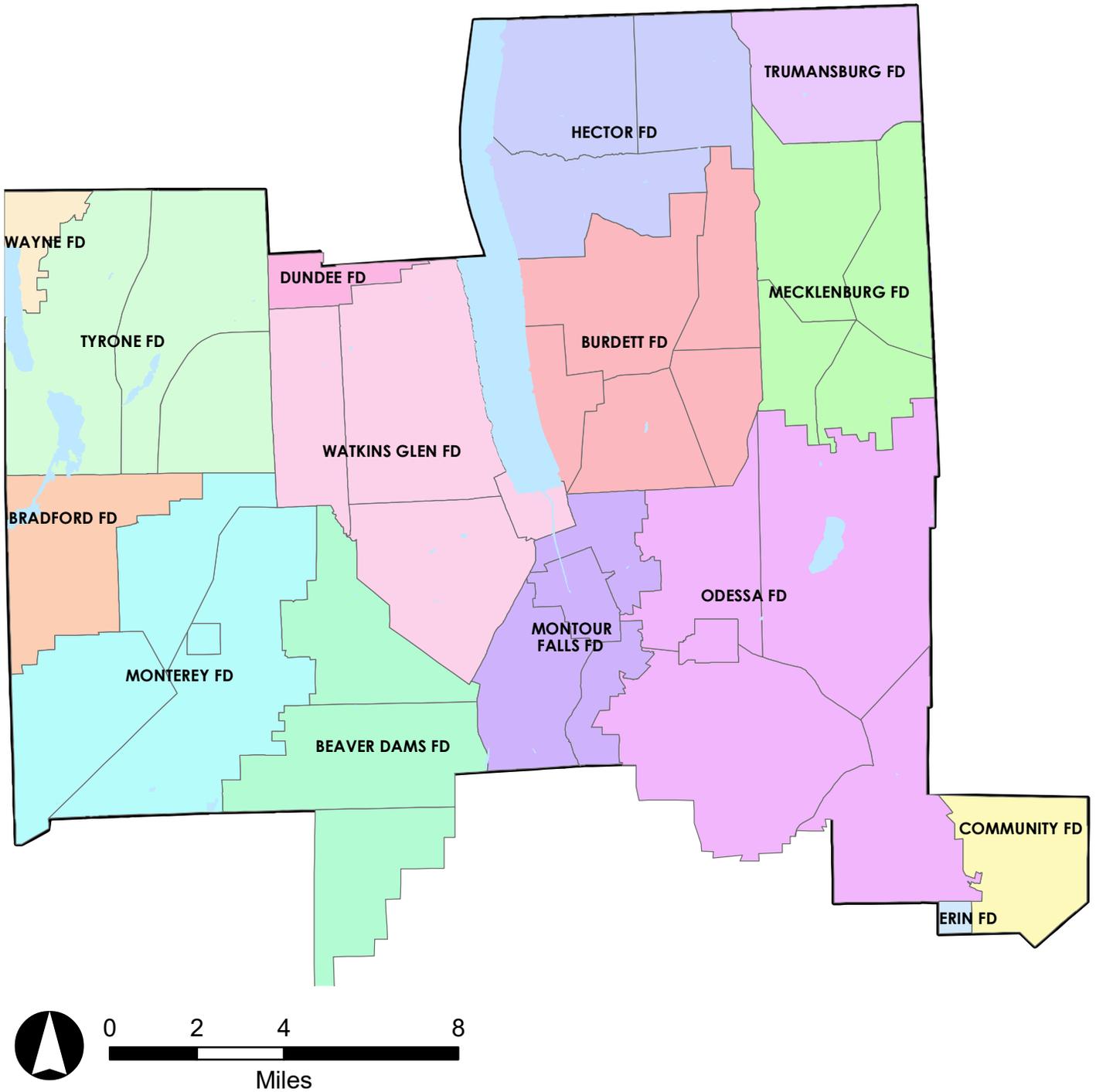
- Beaver Dams Volunteer Fire Department
- Bradford Fire Department
- Burdett Fire Department
- Dundee Fire Department
- Erin Fire Department
- Mecklenburg Volunteer Fire Company, Inc.
- Monterey Volunteer Fire Company, Inc.
- Montour Falls Fire Department
- Odessa Fire Department
- Trumansburg Fire Department
- Tyrone Volunteer Fire Company, Inc.
- Valois, Logan, and Hector Volunteer Fire Company
- Van Etten Fire Department
- Watkins Glen Fire Department
- Wayne Fire Department



Fire districts are shown in Figure 6.

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FIGURE 6: Schuyler County - Fire Districts



source: Schuyler County Planning Department

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EMERGENCY MEDICAL SERVICES

The following organizations provide emergency medical services transport within Schuyler County:

- Schuyler County Volunteer Ambulance Association [ALS]
- Tyrone Volunteer Fire Company, Inc. [BLS]
- Valois, Logan, and Hector Volunteer Fire Company, Inc. [BLS]

PUBLIC HEALTH AND SOCIAL SERVICES

Public health and social services are met through a network of county agencies working collaboratively and with state agencies. In addition to the entities outlined below, several private, state, and ARC facilities provide residential, nursing and assisted living services.

SCHUYLER COUNTY PUBLIC HEALTH

The Schuyler County Public Health Department provides essential public health services and resources for the community. Along with foundational public health services, they also coordinate the Schuyler County Medical Reserve Corps.

SCHUYLER COUNTY OFFICE FOR THE AGING

The Schuyler County Office for the Aging provides information, referrals, and services for county residents aged 60 and older, as well as their caregivers. Through the NY Connects program, the Office for the Aging also provides services to individuals of any age with a disability.

SCHUYLER COUNTY DEPARTMENT OF SOCIAL SERVICES

The Schuyler County Department of Social Services aids individuals and families with many services they require to assist in achieving their highest level of personal and economic self-sufficiency.

SCHUYLER HOSPITAL

Schuyler Hospital, located in Montour Falls, is a 25-bed critical access hospital with the 120-bed Seneca View Skilled Nursing Facility attached. Next to the hospital is the Montour Falls Primary Care and Family Health Center.

TRANSPORTATION

SCHUYLER COUNTY HIGHWAY DEPARTMENT

The Schuyler County Highway Department maintains a county transportation system for the transportation of people, goods, and services across the county. Over 32 county routes, the average daily usage [2019] was nearly 25,000 vehicles. The County Highway Department provides assistance to local highway/public works departments when requested.

LOCAL HIGHWAY/PUBLIC WORKS DEPARTMENTS

Each town within Schuyler County has a highway department for the maintenance of local roads. All villages, except Burdett, maintain a highway or public works department. Burdett's roads are maintained by the Town of Hector.

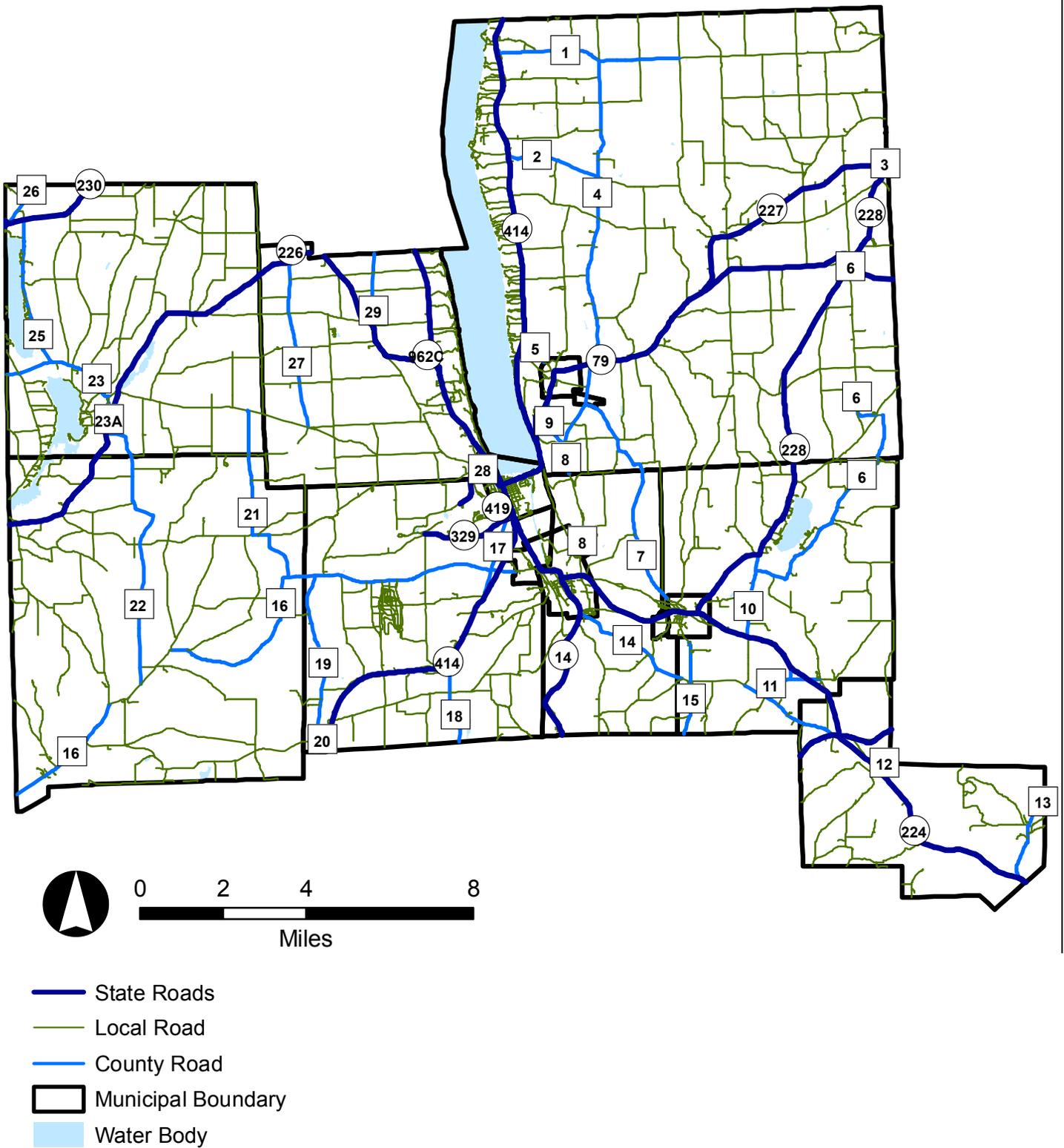
Figure 7 shows all local, county, and state roads in Schuyler County.

RAIL

Rail lines pass through and are used within Schuyler County to haul a variety of goods. The Finger Lakes Railway operates 154 miles of track regionally and links with both Norfolk Southern and CSX. A rail map of Schuyler County is provided as Figure 8.

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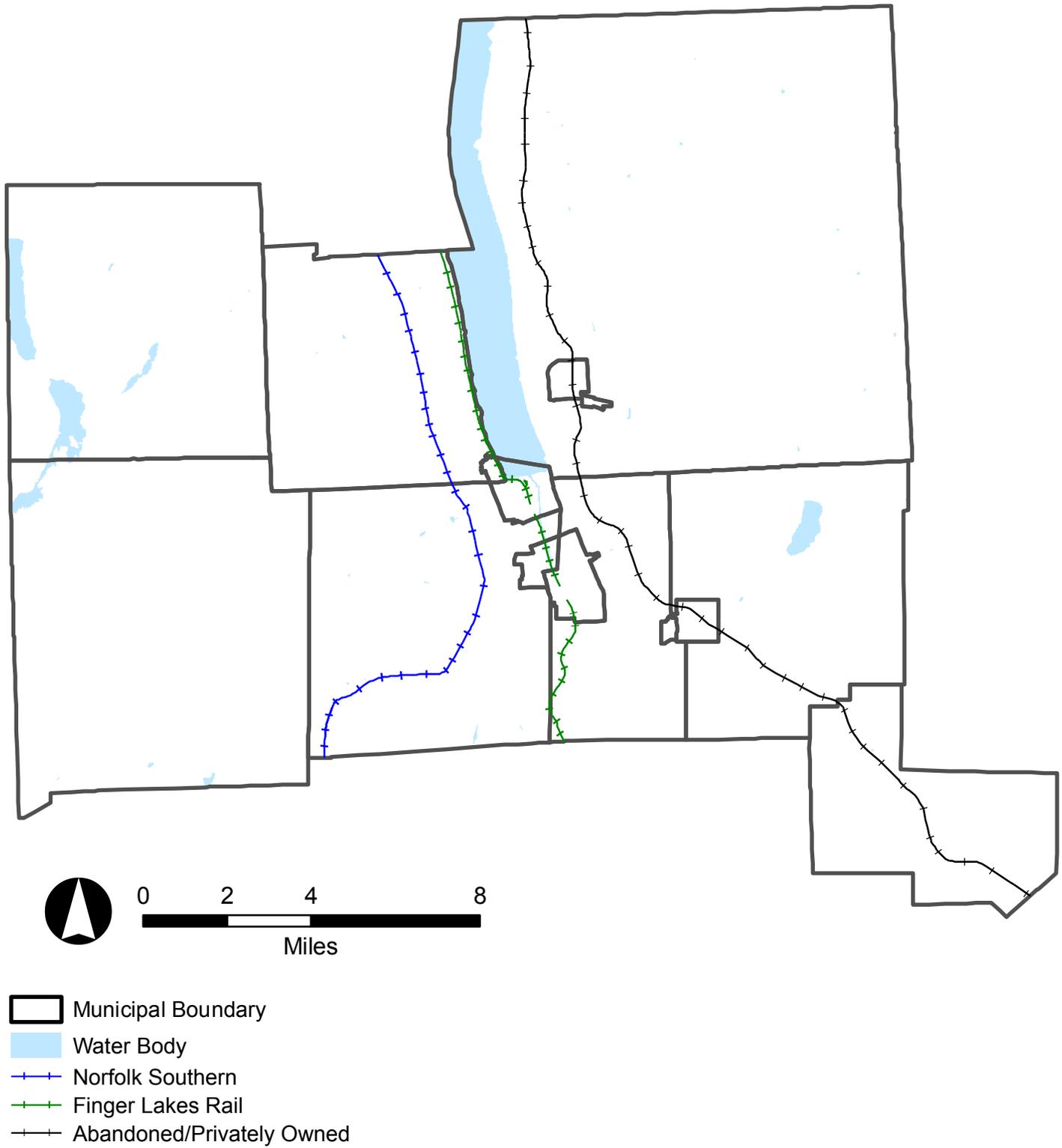
FIGURE 7: Schuyler County - Roads



source: Schuyler County Planning Department

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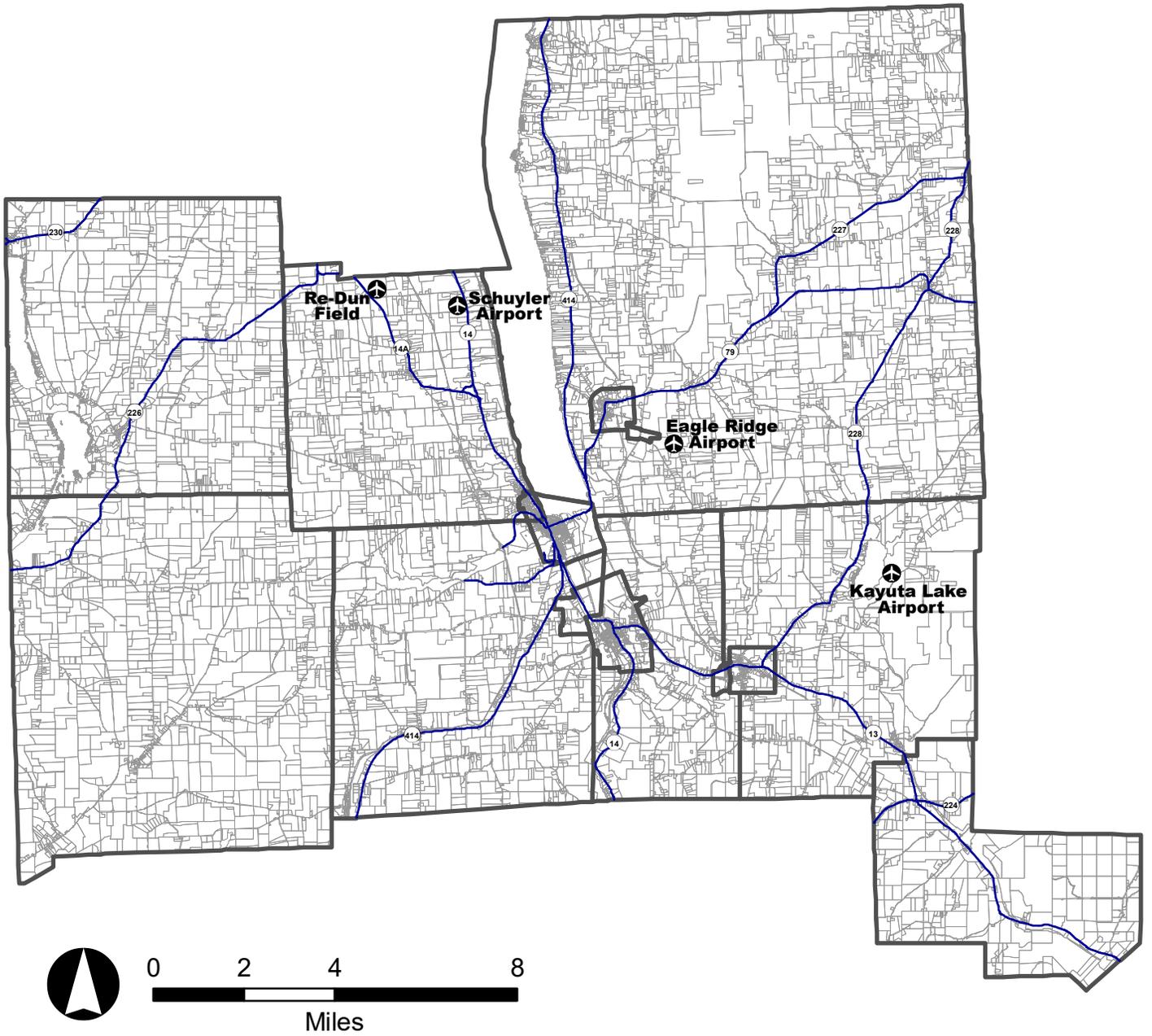
FIGURE 8: Schuyler County - Railroad Infrastructure



source: Schuyler County Planning Department

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FIGURE 9: Schuyler County - Airport/ Landing Strip Locations



 Municipal Boundary

***Note: Schuyler County does not have any public airports or landing strips**

source: Schuyler County Planning Department

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AIR

There are no municipal or public airports in Schuyler County. Figure 9 shows three privately owned air fields within the County.

MARINE TRANSPORTATION

No public water transportation services exist in Schuyler County, however, privately owned fishing and recreational vessels are abundant in Seneca, Cayuta, Lamoka, and Waneta Lakes. Public boat launches are located on each of these lakes.

SCHUYLER COUNTY TRANSIT

Schuyler County Transit is a public transportation system which serves the villages and other areas within Schuyler County. Their routes include Schuyler Hospital and Primary Care and the Schuyler County Human Services Complex. All ages are served, including persons with disabilities, and individuals with lower incomes. Curb to curb transportation is also available.

EDUCATION

Schuyler County residents are served by three public school districts, Odessa-Montour Central School District [K-12], Watkins Glen Central School District [PK-12], and Bradford Central School District [PK-12].

HISTORICAL PROPERTIES

Schuyler County is home to nineteen properties found on the National Register of Historic Places listed in Table 1.

TABLE 1: National Register of Historic Places, Schuyler County	
PROPERTY	ADDRESS
Brick Tavern	108 Catharine Street, Montour Falls
Chapman House	115 N. Monroe Street, Watkins Glen
Coon Family Log Cabin	Hornby Road, Beaver Dams
First Baptist Church of Watkins Glen	Fifth Street and Porter Street, Watkins Glen
First Presbyterian Church of Hector	5519 NYS Route 414, Hector
First Presbyterian Church of Watkins Glen	520 N. Decatur Street, Watkins Glen
Lattin-Crandall Octagon Barn	County Road 14, Catharine
Lee School	New York 14, Montour
Logan Methodist Church	County Road 4 and County Road 2, Logan
Montour Falls Historic District	Main Street and Genesee Streets, Montour Falls
Montour Falls Union Grammar School	208 W. Broadway, Montour Falls
St. James Episcopal Church	112 6th Street, Watkins Glen
Schuyler County Courthouse Complex	Franklin Street, Watkins Glen
US Post Office	600 N. Franklin Street, Watkins Glen
Watkins Glen High School	900 N. Decatur Street, Watkins Glen
Watkins Glen Commercial Historic District	108-400 & 201-317 N. Franklin St., 111 W. 4th St. & 215 S. Madison St., Watkins Glen
Watkins Glen Grand Prix Road Course	Franklin Street, NY 329, NY 409, Watkins Glen
Wayne Village Baptist Church	NYS Route 230, Wayne
Weston Schoolhouse	463 County Road 23, Weston

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TRENDS POPULATION

While population has decreased in Schuyler County by a few hundred since the previous decade, estimates for the current decade are holding fairly static [see Table 2 below]. According to the US Census [2019 estimates], the median age of Schuyler County residents is 46.4 years.

	2000	2010	2019 [EST]	%CHANGE OVER 2010
Population	19,224	18,343	17,920	-2.3%
Households	7,374	7,530	7,344	-2.5%
Housing Units	9,181	9,455	9,795	+3.6%

Also according to the 2019 US Census estimates, over 20.8% of Schuyler County's population is aged 65 or older, which is about 4% higher than the New York State average. This segment of the population is expected to grow in share in coming years, requiring more in services – including medical and emergency services. Additionally, the US Census 2019 estimate of persons with disabilities in Schuyler County [non-institutionalized] is 3,123, which is over 17.6% of the County population. Persons with disabilities may have special medical and communication needs and may have limited resources to respond to and recover from disaster events. The United States Department of Health and Human Services identified in July of 2021 through their emPOWER program that Schuyler County has 4,672 Medicare beneficiaries, of which 256 are dependent upon electricity for dependent, durable medical and assistive equipment and devices, such as ventilators, to live independently in their homes. The Schuyler County Emergency Management Office maintains a voluntary special needs registry to identify individuals with needs.

EMPLOYMENT

The percentage of the Schuyler County population below the poverty level is 15.4 %, about 3% lower than the New York State average [US Census, 2019 estimates]. The unemployment rate for Schuyler County is 7.4%, compared to the New York State unemployment rate of 8.5% [US Bureau of Labor Statistics, March 2021]. Unemployment in Schuyler County tends to vary seasonally, with data over the last five years showing a lower rate in the summer months as compared to the winter months by as much as 3%. This correlates strongly to many of the County's major employment sectors, as indicated in Table 3.

EMPLOYER	SECTOR	EMPLOYEES
Schuyler Hospital	Health Care	435
Schuyler County	Government	253
WalMart	Retail	243
Harbor Hotel	Hospitality	128
US Salt	Salt Mining and Distribution	127
Cargill	Salt Mining and Distribution	111
Wine and Glass Tours	Tourism/ Boating	100
Wagner Hardwoods	Logging and Millwork	90
Watkins Glen International	Tourism/ Automotive Racing Venue	86
Parmenter Motors	Auto Repair	85
Welliver	Construction	77
Hazlitt 1852 Vineyards	Vineyard and Winery	50
BMS	Manufacturing	37

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WEATHER

Schuyler County experiences weather typical for the northeast, with the hills rising from Seneca Lake creating a microclimate ideal for grapes. The average temperature in Schuyler County is 47.3°F, which is close to the average temperature of New York State at 46.4°F. Schuyler County’s average annual liquid precipitation is 33.18 inches, which is below New York State’s average of 38.51 inches. Schuyler County’s average annual snowfall is 54.09 inches, only slightly less than the State average of 55.32 inches.

Humidity tends to peak in Schuyler County in May, June, and September; with an annual average humidity of 76%, compared to New York State’s average of 75.6%. Wind speeds are higher on average, especially in September, with annual average wind speeds of 20.34 miles per hour, compared to New York State’s average of 15.57 miles per hour.

AUTHORITIES AND RESOURCES OF JURISDICTIONS

Each jurisdiction within Schuyler County is important to our overall hazard mitigation strategy. As populations change and community needs evolve, municipalities may elect to change land use regulations. Table 4 shows land use regulations in place throughout Schuyler County. Table 5 provides census data [2010] for all subdivisions of Schuyler County, at the time of publication the 2020 Census Data at this level was not available.

JURISDICTION	COMP. PLAN/LAND USE PLAN	ZONING	SUBDIVISION REGULATIONS	SITE PLAN REVIEW
Schuyler County	2015	No	No	No
Town of Catharine	2015	Yes	Yes	No
Town of Cayuta	No	No	No	No
Town of Dix	2001	Yes	Yes	Yes
Town of Hector	2015	No - In Development	No- In Development	No - In Development
Town of Montour	2007	Yes	Yes	Yes
Town of Orange	2012	No	No	No
Town of Reading	2017	No [Land Use Law]	Yes	Yes
Town of Tyrone	2013	No	Yes	Yes
Village of Burdett	2014	No	No	No
Village of Montour Falls	2017	Yes	No	Yes
Village of Odessa	No	Yes	No - In Development	Yes
Village of Watkins Glen	2013	Yes	No - In Development	Yes

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TABLE 5: Census Data [2010] for all subdivisions of Schuyler County

GEOGRAPHIC AREA	POPULATION	HOUSING UNITS	MOBILE HOMES		AREA IN SQUARE MILES			DENSITY PER SQUARE MILE OF LAND AREA	
			PARKS	PRIMARY STRUCTURE ON PROPERTY	TOTAL AREA	WATER AREA	LAND AREA	POPULATION	HOUSING UNITS
SCHUYLER COUNTY	18,343	9,455	16	1006	342	14	328	55.9	28.8
COUNTY SUBDIVISION AND PLACE									
TOWN OF CATHARINE	1,762	825	3	67	32.9	0.6	32.3	54.6	25.5
Village of Odessa [Part]	516	227			0.9	0	0.9	554.8	244.1
Remainder of Town of Catharine	1,246	598			32	0.6	31.4	39.7	19.1
TOWN OF CAYUTA	556	242	0	48	20.3	0	20.3	27.4	11.9
TOWN OF DIX	3,864	1,779	5	113	36.7	0.5	36.2	106.6	49.1
Village of Montour Falls [Part]	186	31			0.99	0.02	0.97	192.6	32.1
Village of Watkins Glen [Part]	1,569	815			1.8	0.4	1.4	1,145.5	595
Remainder of Town of Dix	2,109	933			34	0.1	33.9	62.2	27.5
TOWN OF HECTOR	4,940	2,619	3	352	112.6	10.2	102.4	48.3	25.6
Village of Burdett	340	166			0.96	0	0.96	353.3	172.5
Remainder of Town of Hector	4,600	2,453			111.6	10.2	101.4	45.4	24.2
TOWN OF MONTOUR	2,308	1,158	0	41	18.6	0	18.6	124.2	62.3
Village of Montour [Part]	1,525	786			2	0	2	746.6	384.8
Village of Odessa [Part]	75	33			0.2	0	0.2	363.3	159.8
Remainder of Town of Montour	708	339			16.3	0	16.3	43.4	20.8
TOWN OF ORANGE	1,609	712	0	130	54.5	0.4	51.1	29.8	13.2
TOWN OF READING	1,707	893	0	82	27.2	0	27.2	62.9	32.9
Village of Watkins Glen [Part]	290	162			0.2	0	0.2	1,532.1	855.9
Remainder of Town of Reading	1,417	713			27	0	27	52.6	27.1
TOWN OF TYRONE	1,597	1,227	2	124	39.6	2.3	37.3	42.8	32.9
PLACE									
VILLAGE OF BURDETT	340	166	0	18	0.96	0	0.96	353.3	172.5
VILLAGE OF MONTOUR FALLS	1,711	817	2	13	3.03	0.02	3.01	568.8	271.6
VILLAGE OF ODESSA	591	260	1	18	1.14	0	1.14	520	228.8
VILLAGE OF WATKINS GLEN	1,859	977	0	0	1.94	0.38	1.56	1,192.4	626.7

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As identified in the Schuyler County Comprehensive Plan, the County is seeking to achieve the following objectives which will better empower local jurisdictions:

- Increase the residents' access to healthcare and other services directly related to their health and wellness and promote healthy lifestyle choices.
- Mitigate motor vehicle and truck traffic so it does not negatively impact the quality of life for residents and businesses along major travel routes.
- Encourage connections to major roadways within our county, while protecting local roads from increased traffic burdens.
- Mitigate sub-standard drinking water and waste water treatment facilities.
- Prioritize development in a way that respects the limitations of the existing public works infrastructure and promotes the expansion of these resources where possible.
- Continue to support the delivery of social services for low income and disadvantaged groups.
- Continue to utilize land use controls and review process that protect open space and vacant land from inefficient development patterns and fragmentation of open space.
- Educate local decision makers and residents on environmental stewardship efforts that apply to their geographical region [i.e. watersheds, forestry].
- Consider ways to decrease our County's environmental footprint.

Each of these objectives serves to improve Schuyler County, making it a better place to work, visit, and live. These objectives have an impact on a variety of hazards which the county and local jurisdictions face, including climate change.

Schuyler County government can't do it alone, however. The towns, villages, businesses, industry, and residents comprise a whole-community approach to hazard mitigation. Below are summarized the existing authorities, policies, programs, and resources of each jurisdiction as well as their ability to improve upon their existing policies and programs.

TOWN OF CATHARINE



The Town has zoning, an up to date comprehensive plan, and an active planning board. Building code enforcement is provided by a part time code enforcement officer. Catharine's fire protection is provided for by the Odessa Fire Department. The town has its own highway department. Unemployment in the town is high. While the Connecticut Hill Wildlife Management Area is a wonderful natural resource, it does limit property taxes in the town, which limits the town's finances and ability to take on

additional projects. The town is hoping to better utilize natural areas for recreation and organized sports or activities for use by residents as well as visitors.

A general lack of internet services in the town limits some ability to inform and engage residents and businesses. The town is working toward gaining better control of development in sensitive areas, such as the area around Cayuta Lake.

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TOWN OF CAYUTA



The Town of Cayuta does not have any planning mechanisms in place at this time. Building code enforcement is provided by a part time code enforcement officer. Like Catharine, the Town of Cayuta is part of the Odessa Fire Protection District and they have their own highway department. Also similar to Catharine, much of the Town of Cayuta has an abundance of natural resources, both from the Connecticut Hill Wildlife Management Area as well as the Arnot Forest. While these provide wonderful opportunities for outdoor recreation activities, they limit Cayuta's tax base, which limits the town's finances.

Cayuta's population and population density are low and, despite an average median household income only slightly below the county average, both the unemployment and poverty rates are high. Because of this, Cayuta seeks to identify local economic development initiatives.

TOWN OF DIX



The Town of Dix has the second highest population in Schuyler County. Its proximity to the Villages of Montour Falls and Watkins Glen, as well as being home to the Watkins Glen International Speedway provide Dix with many opportunities. Dix also contains Watkins Glen State Park and an abundance of agriculture.

Dix has updated zoning, a comprehensive plan from 2001, and an active planning board. Building code enforcement is provided by a part time code enforcement officer. Fire protection is provided for by the Watkins Glen, Beaver Dams, and Montour Falls fire departments. Dix has its own highway department and a small municipal water operation. Dix is also home to the

Schuyler Industrial Park, which is a prepared site ready for development, with one building.

Dix is on par with the averages of Schuyler County's demographics. The town's median age, median household income, unemployment rate, and poverty rate are at or near county averages. Dix is one of the most densely populated towns and has a low rate of housing unit vacancy.

Dix would like to capitalize on its location and resources by bringing more job growth, housing, and services, while still maintaining a small town feel. The town is also seeking to capitalize on its plateau location by establishing wind farms to green energy use. While Dix seeks to attract more business and investment, it is among the more economically stable jurisdictions in Schuyler County, with some resources available for hazard mitigation projects.

TOWN OF HECTOR



The Town of Hector benefits from a western boundary on Seneca Lake, and much of its eastern side containing part of the only national forest in New York State. Hector is the largest town geographically, and is home to many wineries and distilleries.

The Town of Hector has an up to date comprehensive plan and is in the process of developing potential zoning and land use regulations that are anticipated to be adopted in 2022. These will be necessary tools for the town to achieve its goals of protecting farmlands from development and mitigating against flooding impacts. Building code enforcement is provided by a full time code enforcement officer. Fire protection in Hector is

provided by five fire departments including the Valois-Logan-Hector Fire Department, Burdett Fire Department, Trumansburg Fire

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Department, Mecklenburg Fire Department, and Odessa Fire Department. Hector has its own highway department and partners with the Village of Burdett on a small public water system.

Hector is one of only two towns in the county that experienced population growth in the past decade. Hector enjoys a higher than average median household income and lower unemployment rate than the county averages. While Hector's economy is fairly stable, there are few additional resources available for hazard mitigation projects.

TOWN OF MONTOUR

The Town of Montour is the smallest town in Schuyler County geographically, yet has the highest relative population density. The Town of Montour shares a border with the Village of Watkins Glen and contains parts of the Villages of Montour Falls and Odessa. State Route 14 runs north/south through the town, bringing a high volume of commerce and visitors. The Town of Montour still maintains a small town feel and offers access to a variety of natural resources, such as Queen Catharine Marsh, several scenic waterfalls including Shequaga Falls, Havana Glen, and excellent fishing.

Montour's fire protection is provided by the Odessa Fire Department and the Montour Falls Fire Department. It has its own highway department. The town has zoning, a comprehensive plan, and an active planning board. Building code enforcement is provided by a part time code enforcement officer.

Montour has the third lowest median household income in the county, the second highest poverty rate, and the fifth highest unemployment rate. These factors weigh heavily on the town and limit its ability to allocate many resources to hazard mitigation projects.

TOWN OF ORANGE



The Town of Orange is comprised of over half state-designated forest and park land, which, while a wonderful asset, limits their tax base. Economic indicators for Orange are quite diverse, with the town having a higher than average median household income, yet also a significantly higher than average poverty rate. The closing of the Monterey Shock Treatment Facility by the New York State Department of Corrections continues to impact the economy of the Town of Orange.

The Town of Orange is covered by three fire departments, Bradford Fire Department, Monterey Fire Department, and Beaver Dams Fire Department. The town maintains its own highway department.

Orange has an up to date comprehensive plan but does not utilize any zoning or land use regulations. Although the town has an active planning board, they do not have any regulative authority in the town. Building code enforcement is provided by a part time code enforcement officer.

The Town of Orange has some significant economic challenges, which emphasize its dependence on outside assistance for many hazard mitigation projects.

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TOWN OF READING



The Town of Reading is a thriving town, with the highest median household income in the county and a low unemployment rate. The town is home to a number of popular Seneca Lake wineries as well as other businesses and industry. The town encompasses part of the Village of Watkins Glen, which is the county seat and the economic center of Schuyler County.

Town residents want to ensure controlled development, therefore the town has a land use law and an active planning board. They have a comprehensive plan, but it is dated. Building code enforcement is provided by a part time code enforcement officer.

Most fire protection in Reading is provided for by the Watkins Glen Fire Department, with a portion of the town in the northwest corner covered by the Dundee Fire Department. Reading maintains its own highway department.

Reading has a fair amount of resources to address many of their hazard mitigation needs, but like most towns still requires some outside assistance.

TOWN OF TYRONE



The Town of Tyrone is the third largest town in Schuyler County by size, with a population and population density average for the county. Tyrone is mostly agricultural but also has access to wonderful water resources, including Lamoka Lake, Waneta Lake, and the Tobehanna Creek. The town has one of the lowest median household incomes in the county and the fourth largest poverty rate, however they have a fairly low unemployment rate. Nearly half of the town's housing stock is vacant.

Tyrone has an up to date comprehensive plan but does not utilize any zoning or land use regulations. The town has an active planning board that does site plan review. Building code enforcement is provided by a part time code enforcement officer. The town maintains its own highway department and is covered primarily by the Tyrone Fire Department, with the northwest corner of town covered by the Wayne Fire Department.

Tyrone is seeking ways to confront their economic challenges, including promotion of farming and ecotourism. Their current economic state, however, limits their ability to take on larger hazard mitigation projects.

VILLAGE OF BURDETT



Burdett is the smallest of Schuyler County's villages, with a size of only one square mile and a population under 350. Unemployment and poverty rates are slightly above county averages and median household income is below the county average. Many of the small businesses within Burdett cater to the needs of village residents, residents of the Town of Hector, and visitors. Burdett is wholly contained within the Town of Hector and shares a small municipal water system with the Town, which provides service mostly in and around the village.

The Village has an up to date comprehensive plan but does not utilize any zoning or land use regulations. Their building code enforcement is provided by a part time code enforcement officer. Burdett does have its own fire department, but road services are provided by the Town of Hector.

Burdett has a small economy and limited ability to conduct many of their own hazard mitigation projects, but is pursuing options such as the joint Burdett and Odessa Commercial District Improvement Strategy which is designed to identify opportunities to sustain economic vitality in the two villages.

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VILLAGE OF MONTOUR FALLS



The Village of Montour Falls is one of the biggest economic centers of Schuyler County. Montour Falls' land mass is split between the Town of Dix and the Town of Montour. The Village is the largest in the county geographically and the second largest by population.

The Village of Montour Falls offers a number of natural resources, businesses, and both local and county government and social services. Visitors frequent the Shequaga Falls and Queen Catharine Marsh as well as the variety of small businesses within the village. The County Human Services Complex is in Montour Falls near the historic State Academy of Fire Sciences. Within the Fire Academy is also a State Police Station which services the area. Within the village is also Schuyler Hospital, the only hospital in Schuyler County.

Fire protection in Montour Falls is provided by the Montour Falls Fire Department, which also provides fire protection to outside areas. The village also has its own highway department and public works, which maintains a municipal water system for the village. The village has zoning, an up to date comprehensive plan, and an active planning board. Building code enforcement is provided by a full time code enforcement officer.

Despite this infrastructure, the Village of Montour Falls has the highest poverty rate in the county, a high unemployment rate, and low median household income. Montour Falls seeks to counter these statistics with a revitalization plan and an increase in development in their downtown area.

While the Village of Montour Falls has a somewhat fragile economy, they do have a number of resources, both village-owned as well as those which happen to reside in the village. This activity emphasizes the importance of the Village of Montour Falls and the need to continue important hazard mitigation projects here, especially flood protection.

VILLAGE OF ODESSA



The Village of Odessa lies mostly within the Town of Catharine, with a small portion within the Town of Montour. Odessa is the second smallest village in the county. Odessa's unemployment is the highest in the county. Coupled with a below average median household income and a higher than average poverty rate for the county, Odessa has a challenging economy.

The Village of Odessa is home to the Odessa-Montour Central School District, which is the largest employer in the village. Odessa maintains its own fire department, which provides fire protection for outside areas. Odessa also has its own highway department and municipal water services.

Odessa has zoning and an but disbanded their planning board and the Village Board now completes site plan review. They do not have a current comprehensive plan in place. Building code enforcement is provided by a part time code enforcement officer. Odessa, like many other jurisdictions within Schuyler County, is lacking economic resources for all but basic hazard mitigation projects.

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VILLAGE OF WATKINS GLEN



The Village of Watkins Glen falls mostly within the Town of Dix, with a portion also lying with the Town of Reading. The village is the largest by population and second largest by geography. Watkins Glen is the county seat and center of much activity in the county. A variety of natural resources, including Seneca Lake, the Catharine Creek Wildlife Management Area, and Watkins Glen State Park can be accessed from the village.

The Village of Watkins Glen provides many of its own services, including fire protection, highway and public works, and law enforcement. The village is also home to an ambulance service which provides for much of the area. The Watkins Glen Highway Garage is a joint facility, shared with

the Schuyler County Highway Department. Watkins Glen provides both water and wastewater services for the village. Schuyler County's Court House Complex and Community and Public Health Building are both located in Watkins Glen.

Watkins Glen has zoning, an up to date comprehensive plan, and an active planning board. The village employs a Village Superintendent of Utilities who oversees the Public Works Departments within the village and acts as a liaison between the village board and other agencies. Building code enforcement is provided by a full time code enforcement officer.

Watkins Glen has a busy economy, with a variety of small businesses and new development, in 2008 a new waterfront hotel overlooking Seneca Lake, which has spurred additional economic activity. In 2017 the Village of Watkins Glen was awarded the \$10 million Downtown Revitalization Award which has added to the redevelopment of the Village. The village is also home to the Watkins Glen School District. Despite this activity, the village has the second lowest overall median household income in the county and the third highest unemployment rate, although the poverty rate is relatively low for the county.

Overall, the Village of Watkins Glen has the greatest resource base from which to draw upon for a variety of hazard mitigation projects. Unfortunately, a fair amount of infrastructure within the village is aging, requiring full replacement in many cases, which may not be financially possible for the village. They recently partnered with the Village of Montour Falls to construct a new wastewater treatment plant, that will greatly improve the water quality of Seneca Lake, and provide additional climate resiliency for the two villages.

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HAZARD IDENTIFICATION

COUNTY EMERGENCY PREPAREDNESS ASSESSMENT

Schuyler County is susceptible to numerous hazards. On August 24, 2020, local, county, and state stakeholders participated in the County Emergency Preparedness Assessment [CEPA] for Schuyler County. The listing of CEPA participants is provide below in Table 6 and the CEPA findings and results are detailed in Figures 10, 11, and 12.

NAME	AGENCY	EMAIL ADDRESS
Albert Cheverie	NYS DOH	albert.cheverie@health.ny.gov
Brian Lee Gardner	Schuyler Hospital	gardnerb@schuylerhospital.org
Chad Kehoe	NYSDEC	chad.kehoe@dec.ny.gov
Chris Caccia	Schuyler County	ccaccia@co.schuyler.ny.us
Christopher Pounds	NYS OEM	christopher.pounds@dhses.ny.gov
Donna R Davis	American Red Cross	Donna.Davis5@redcross.org
Doug Gordner	OFPC	douglas.gordner@dhses.ny.gov
Dylan Maybee	DHSES	dylan.maybee@dhses.ny.gov
Erik Dalecki	NYS DEC	erik.dalecki@dec.ny.gov
Erik Holter	OFPC	erik.holter@dhses.ny.gov
Frank Davis	American Red Cross	Frank.Davis2@redcross.org
Frazer Lonie	DHSES	frazer.lonie@dhses.ny.gov
Jason T. Neznok	DHSES	Jason.Neznek@dhses.ny.gov
Jennifer Davis	Schuyler County EM	jgeck@co.schuyler.ny.us
John O'Brien	NYSP	john.obrien@troopers.ny.gov
Joseph Indelicato	NYSDOH	joseph.indelicato@health.ny.gov
Kristin VanHorn	Schuyler County	kvanhorn@co.schuyler.ny.us
Lauri Walker	DHSES Grants FMU	lauri.walker@dhses.ny.gov
Lisa Burkovich	NYS DHSES OEM	lisa.burkovich@dhses.ny.gov
Matt Curran	DHSES	matthew.curran@dhses.ny.gov
Matthew Gillette	NYS DEC	matthew.gillette@dec.ny.gov
Mike Zamiarski	NYS DEC	mike.zamiarski@dec.ny.gov
Patrick Coyle	DHSES OEM	patrick.coyle@dhses.ny.gov
Philip C Barnes	Schuyler County	PBarnes@Co.Schuyler.NY.US
Ruth E Hart	NYS DOT	ruth.hart@dot.ny.gov
Tim Walsh	NYSDEC	tim.walsh@dec.ny.gov
Timothy Alimossy	NYS DOT	Timothy.Alimossy@dot.ny.gov
Timothy O' Hearn	Schuyler County	tohearn@co.schuyler.ny.us
Tom Smith	Schuyler Hospital	smitht@schuylerhospital.com
William E Yessman Jr	Schuyler Sheriff's Office	wyessman@co.schuyler.ny.us
William Kennedy	Schuyler County EMO	bkennedy@co.schuyler.ny.us

HAZARD IDENTIFICATION

Participants rated natural, technological, and human-caused disasters based upon probability [likelihood] and severity of impact [consequence]. The top three rated hazards were:

- Flooding
- Severe Wind/Tornado
- Cyber Attack

The Medium-High rated hazards included:

- Hazardous Materials Release - In Transit
- Active Shooter
- Pandemic
- Severe Ice Storm
- Severe Winter Storm

Medium rated hazards included:

- Critical Infrastructure Failure
- Landslides
- Food Contamination
- Major Transportation Accidents

Medium-Low rated hazards included:

- Hurricanes/Tropical Storm
- Extreme Temperatures
- Biological Agent Release
- Improvised Explosive Device
- Radiological Dispersal Device

Low rated hazards included:

- Earthquakes
- Drought
- Animal Disease
- Wildfire
- HazMat Release
- Major Fires [non-wild fire]
- Internet Connectivity Failure

Very low rated hazards included:

- Improvised Nuclear Device
- Sustained Power Outage
- Natural Gas/Propane Storage
- Radiological Release [fixed site]

A narrative discussing the past occurrences, probability of future events, and potential impacts of each identified hazard is included in Section IV Risk and Disaster Resilience Assessment.

FIGURE 10: CEPA Risk Assessment Ratings shows the rating of all hazards through the CEPA Process. [NYS Division of Homeland Security and Emergency Management, 2021]

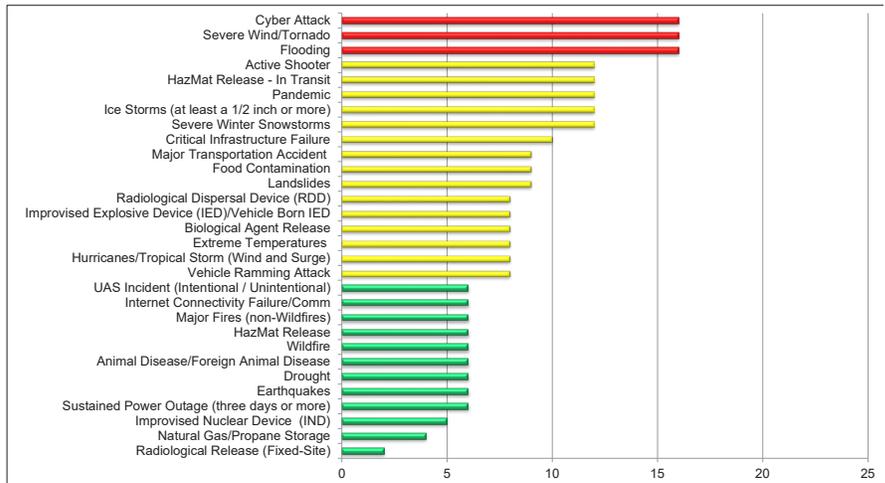


FIGURE 11: Detailed Scoring of each hazard from the CEPA [NYS Division of Homeland Security and Emergency Management, 2021]

Hazard	Likelihood	Consequence	Relative Risk Score
Flooding	High	High	16
Severe Wind/Tornado	High	High	16
Cyber Attack	High	High	16
Active Shooter	Medium	High	12
Severe Winter Snowstorms	High	Medium	12
Ice Storms (at least a 1/2 inch or more)	Medium	High	12
Pandemic	Medium	High	12
HazMat Release - In Transit	Medium	High	12
Critical Infrastructure Failure	Low	Very High	10
Landslides	Medium	Medium	9
Food Contamination	Medium	Medium	9
Major Transportation Accident	Medium	Medium	9
Hurricanes/Tropical Storm (Wind and Surge)	Low	High	8
Extreme Temperatures	High	Low	8
Biological Agent Release	Low	High	8
Improvised Explosive Device (IED)/Vehicle Born IED	Low	High	8
Radiological Dispersal Device (RDD)	Low	High	8
Vehicle Ramming Attack	Low	High	8
UAS Incident (Intentional / Unintentional)	Low	Medium	6
Earthquakes	Low	Medium	6
Drought	Medium	Low	6
Animal Disease/Foreign Animal Disease	Low	Medium	6
Wildfire	Medium	Low	6
HazMat Release	Low	Medium	6
Major Fires (non-Wildfires)	Low	Medium	6
Internet Connectivity Failure/Comm	Low	Medium	6
Sustained Power Outage (three days or more)	Medium	Low	6
Improvised Nuclear Device (IND)	Very Low	Very High	5
Natural Gas/Propane Storage	Low	Low	4
Radiological Release (Fixed-Site)	Very Low	Low	2

FIGURE 12: CEPA Likelihood and Consequence Scales provides definitions of the terms used in the likelihood and consequence scales. [NYS Division of Homeland Security and Emergency Management, 2021]

Risk Assessment (based on a credible worst-case threat)	
Likelihood	
Very High	This event is expected to occur, without question, based on historical precedence in this county (natural/accidental hazards) or current intelligence reporting (terrorism threats).
High	It is likely that this event will occur in this county based on historical precedence (natural/accidental hazards) or current intelligence reporting (terrorism threats).
Medium	This event could occur, but it generally does not happen with any regular frequency in this county (natural/accidental hazards) and current intelligence does not indicate that it is an imminent threat (for terrorism).
Low	There is the potential for this event to occur, but it is very unlikely in this county.
Very Low	This event is not expected to occur within this county.
Consequence	
Very High	This event would have a devastating (or potentially catastrophic) impact on the people, responders, property and economy in this county; all mutual aid networks (local, State, and Federal) would be immediately utilized and government functions would severely or wholly be compromised.
High	The impact of this event would be very significant on the people, responders, property and economy in this county; significant mutual aid resources would be called in from surrounding counties, the State, and the Federal government.
Medium	The impact of this event would be noticeable on the people, responders, property and economy in this county; mutual aid would likely be needed from other counties and/or the State.
Low	The impact of this event would be minimal on the people, responders, property, and economy in this county; response could generally be done without mutual aid.
Very Low	This event would cause virtually no impact on the people, responders, property and economy in this county.

| HAZARD IDENTIFICATION |

HISTORIC DATA

Historic data should always be referenced to identify patterns, vulnerabilities, and past impacts. Schuyler County has received fifteen federal disaster declarations since 1970, which are detailed in Figures 13 and 14 and Table 7.

FIGURE 13: Nature of Federal Disaster Declarations for Schuyler County between 1970 and 2020. [FEMA, 2021]

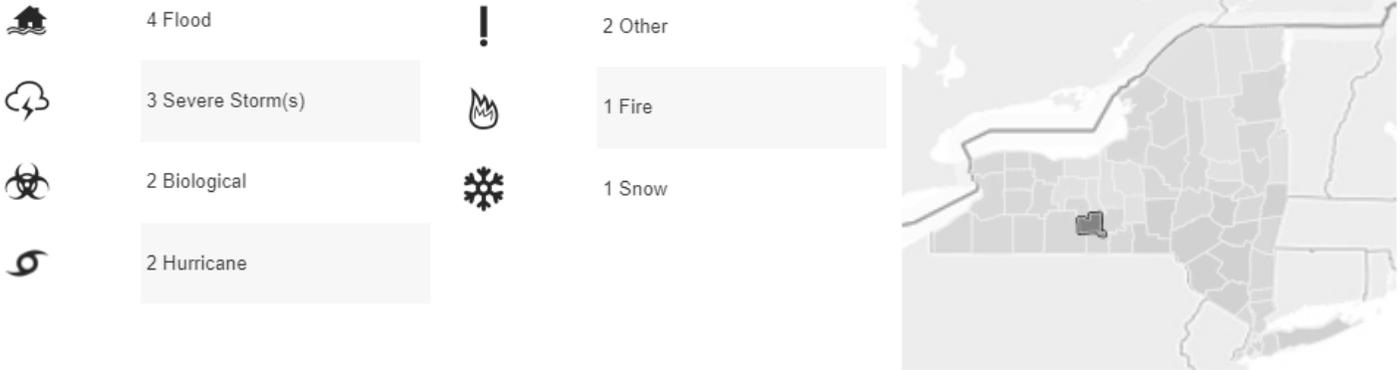


FIGURE 14: Months which Federal Disaster Declarations Occurred between 1970 and 2020 [FEMA, 2021]

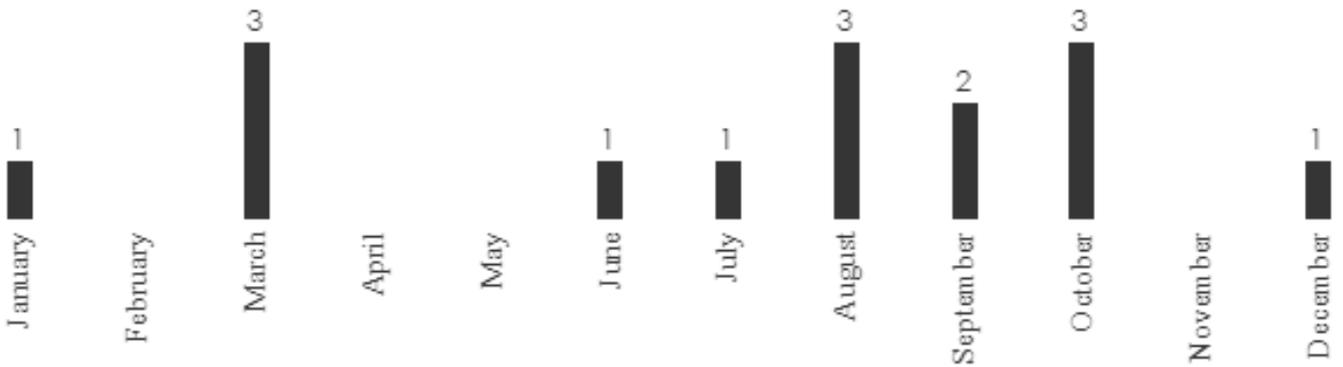


TABLE 7: Federally Declared Disasters for Schuyler County [FEMA, 2021]

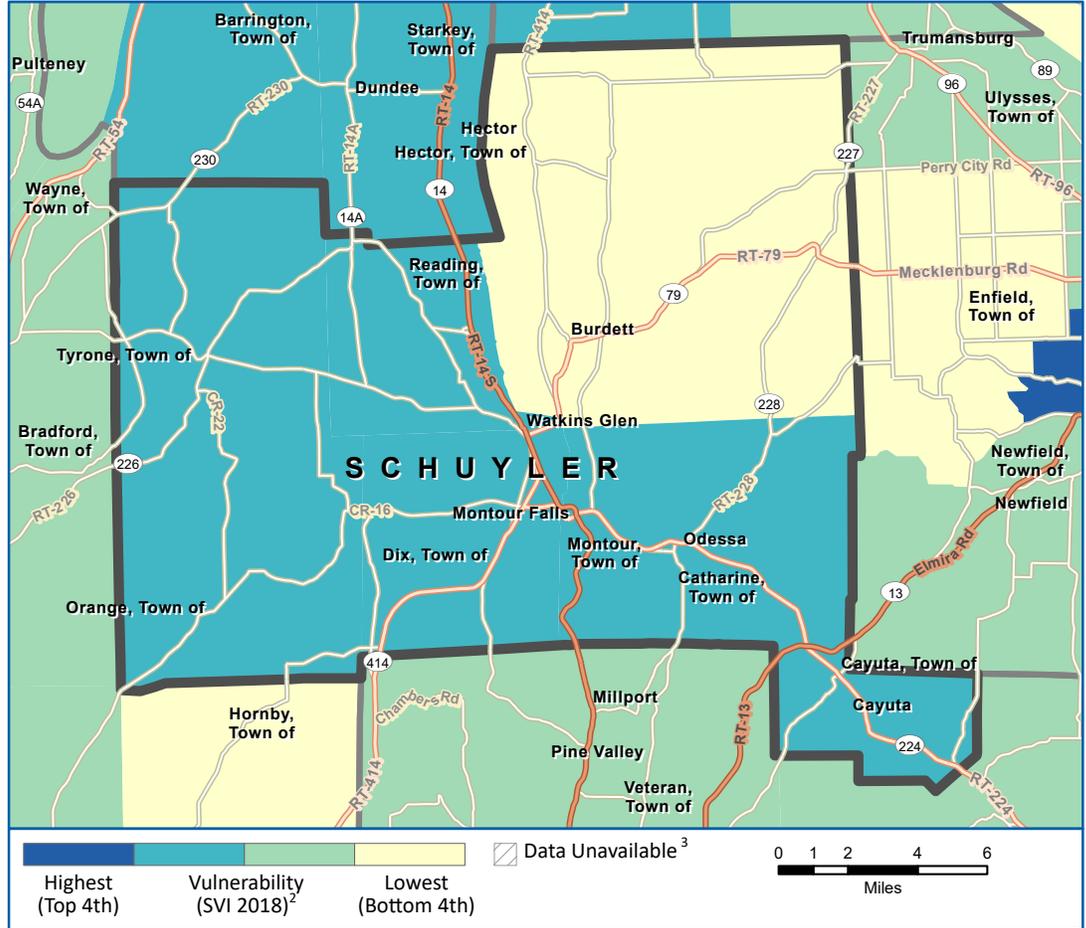
YEAR OF DECLARATION DATE	DECLARATION TITLE	DISASTER NUMBER
1970	Heavy Rains and Flooding	290
1972	Tropical Storm Agnes	338
1993	Severe Blizzard	3107
1996	Severe Storms and Flooding	1095
1996	Severe Storms High Winds, Rain and Flooding	1148
2000	West Nile Virus	3155
2001	Fires and Explosions	1391
2003	Power Outage	3186
2003	Severe Storms, Flooding and Tornadoes	1486
2004	Severe Storms and Flooding	1534
2005	Hurricane Katrina Evacuation	3262
2012	Hurricane Sandy	3351
2018	Severe Storms and Flooding	4397
2020	COVID-19	3434
2020	COVID-19 Pandemic	4480

| HAZARD IDENTIFICATION |

SOCIAL VULNERABILITY INDEX

Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters to human-caused threats. The Social Vulnerability Index [SVI] Map for Schuyler County depicts the social vulnerability of communities at census tract level. These maps, produced by the Center for Disease Control's Agency for Toxic Substances and Disease Registry [ATSDR], utilize data from fourteen census-derived factors grouped into four themes that summarize the extent which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

FIGURE 15: Social Vulnerability Index - Schuyler County [CDC ASTDR, 2018]



More on the Social Vulnerability Index can be found at <http://svi.cdc.gov/Index.html>.

As shown in Figure 15, you can see the overall SVI for all of the towns with the exception of the Town of Hector has a middle-highest overall social vulnerability, where as the Town of Hector has the lowest overall social vulnerability. The four key SVI themes [shown in Figure 16] provide greater detail of the main factors that drive SVI. The socioeconomic status indicators match those of the Overall Social Vulnerability with the exception the Town of Hector has a lowest to middle vulnerability.

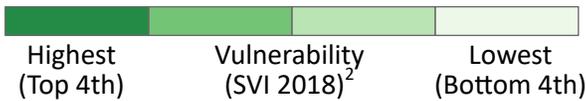
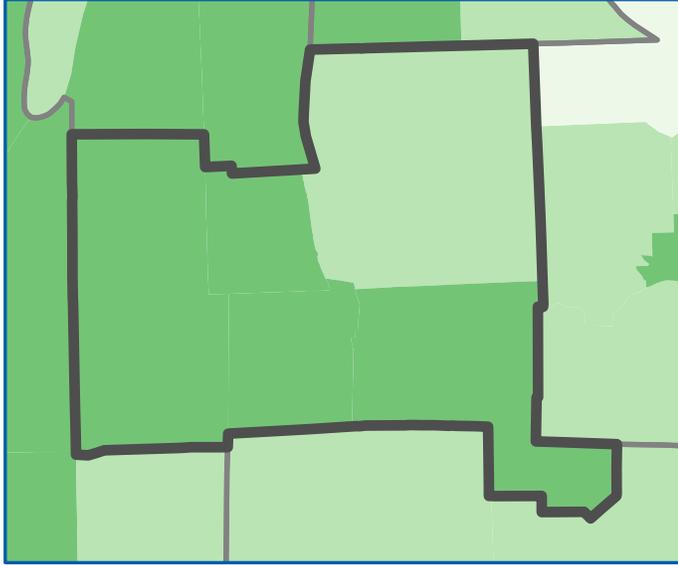
The household composition factors rate the south central area of the county with the highest vulnerability rating while the south east, western, and north central areas rate middle to highest. The north east area of the county rates medium to lowest for household composition.

The housing and transportation theme area indicates the south eastern area of the county as a high vulnerability while the south central and western areas rate middle to highest. The north central and north eastern areas of the county rate middle to lowest in this theme area. All of Schuyler County has a lowest vulnerability rating for the race/ethnicity/language theme.

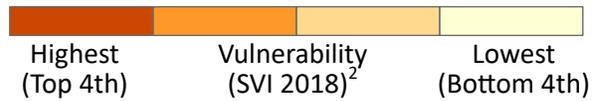
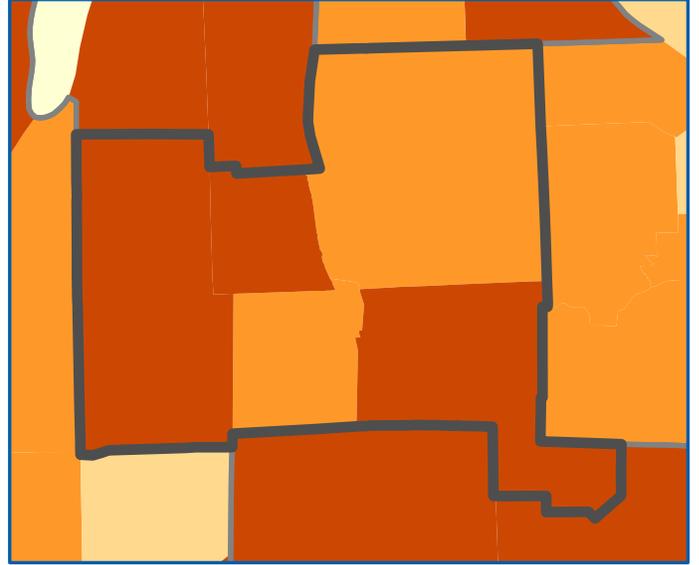
| HAZARD IDENTIFICATION |

FIGURE 16: Social Vulnerability Index Themes - Schuyler County [CDC ASTDR, 2018]

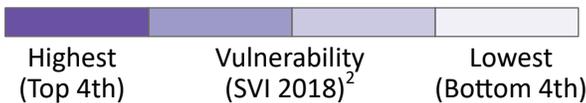
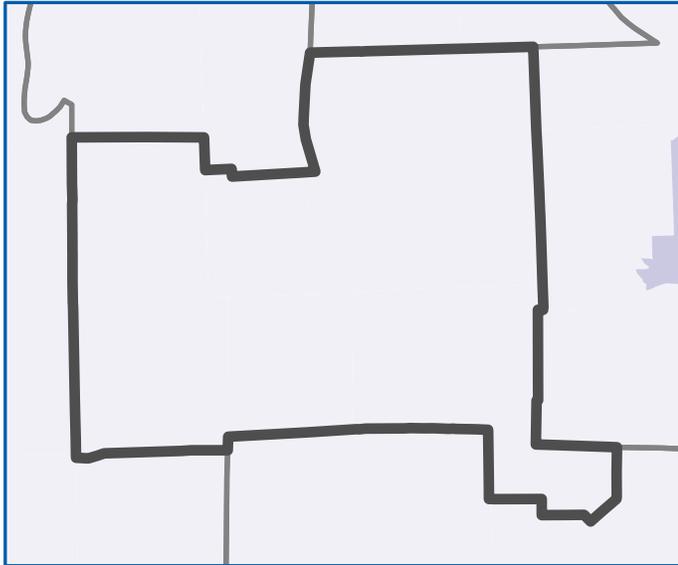
Socioeconomic Status⁵



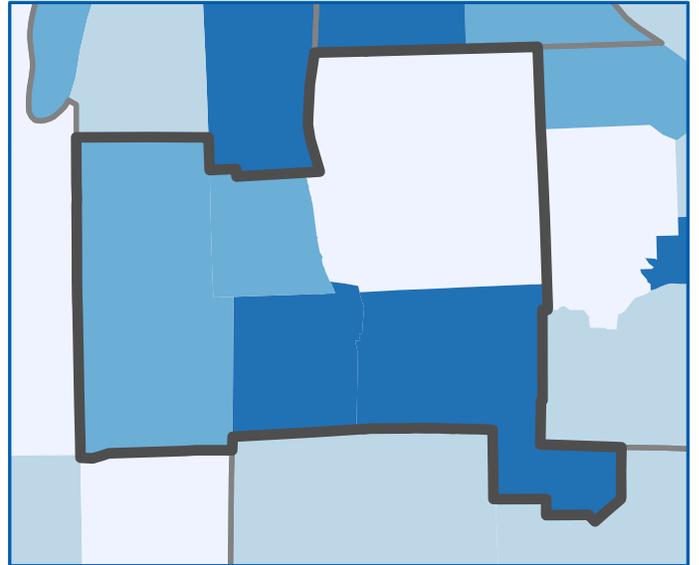
Household Composition/Disability⁶



Race/Ethnicity/Language⁷



Housing Type/Transportation⁸



Data Sources: ²CDC/ATSDR/GRASP, U.S. Census Bureau, Esri® StreetMap™ Premium.
Notes: ¹Overall Social Vulnerability: All 15 variables. ³Census tracts with 0 population. ⁴The CDC SVI combines percentile rankings of US Census American Community Survey (ACS) 2014-2018 variables, for the state, at the census tract level. ⁵Socioeconomic Status: Poverty, Unemployed, Per Capita Income, No High School Diploma. ⁶Household Composition/Disability: Aged 65 and Over, Aged 17 and Younger, Single-parent Household, Aged 5 and over with a Disability. ⁷Race/Ethnicity/Language: Minority, English Language Ability. ⁸Housing Type/Transportation: Multi-unit, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: New York NAD 1983 UTM Zone 18N, CM shifted to -76.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
 CDC SVI web page: <http://svi.cdc.gov>.

| HAZARD IDENTIFICATION |

CRITICAL INFRASTRUCTURE FAILURE

Schuyler County possesses a variety of critical infrastructure assets and systems which are vital to county and local government, our residents, and our businesses. The loss or incapacitation of any of these can carry potentially devastating consequences. Incapacitation or loss can come from any number of causes, including the hazards listed in this hazard mitigation plan as well as aging infrastructure that was not designed to support the increased population it does today.

Of the 16 critical infrastructure sectors identified nationally, Schuyler County possesses most. Loss or incapacitation of our critical infrastructure may only have local impact initially, but those impacts can spread over time. Tables 8 and 9 identify Schuyler County's critical infrastructure while Figures 17, 18, and 19, identify GIS mapped locations.

PAST OCCURRENCES

The impacts of a disaster are compounded when damage to a critical facility impedes emergency response or the provision of essential services. While minor flooding and utility outages have brought the majority of concern to critical infrastructure, there have been some more significant past incidents. For example, the County Public Safety Building is located outside of the mapped 100-year floodplain, but Glen Creek flooded the site in 1935. Following that event, the stream was relocated to its present course and concrete retaining walls were constructed. The electric substation in the Town of Montour is also located outside of the mapped 100-year floodplain, but has experienced repeated flooding from Catharine Creek. In 1997, an earthen berm was constructed along the stream to protect the substation and adjacent development. Additionally, the primary County Office Building located on 9th Street in Watkins Glen has experienced flooding in the past. This is especially concerning since the County Emergency Operations Center is in the basement of the building. The building is not in a 500 year flood zone, but a repeat of this event would be considered a worst case scenario.

PROBABILITY OF FUTURE EVENTS

The probability of future events is considered to be "occasional" mean the event is probably in the next five years. As identified in the narrative for previous hazards, impacts from these hazards can threaten all areas of Schuyler County. Of particular concern are the County Human Services Complex, which is located in a FIRM Zone B, indicating a 500 year flood area.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Except for major transportation routes and regional wastewater treatment facility, none of the critical facilities in Schuyler County are located within mapped 100-year floodplains, however all are potentially vulnerable to damage from a severe hazard event. Mitigation measures have been and continue to be implemented for much of our critical infrastructure, including projects such as flood control and emergency power generation. Establishing alternate systems and redundancies is important to ensuring continuity of services and protection of life and property.

A new emergency radio communications system being installed in Schuyler County in 2015 adds two additional tower sites, contributing to coverage and redundancy.

Solid building construction reduces, but does not eliminate the potential for damage from extreme winds or ice. We must regularly assess our risk and disaster resilience and identify opportunities for long-term vulnerability reduction. Protections such as these will continue to lessen the severity of the impact and reduce down time of our critical infrastructure.

The County Social Services Complex is particularly vulnerable to flooding, as it is located in a FIRM Zone B area, indicative a 500 year flood zone. A project is identified in this hazard mitigation plan to determine strategies to mitigate against this hazard.

Further, the primary county office building on 9th Street in Watkins Glen has been impacted by flooding in the past. While the building is located well away from any mapped flood hazard area, flooding of this building would be a worst case scenario, especially with the county emergency operations center located in the basement. A project is included in this hazard mitigation plan to identify possibilities for relocating the EOC.

| HAZARD IDENTIFICATION |

TABLE 8: Quick Reference Listing of Schuyler County Critical Infrastructure

	MUNICIPAL OFFICES	TRANSPORTATION INFRASTRUCTURE	FIRE STATION	MUNICIPAL POLICE	MUNICIPAL WATER	MUNICIPAL SEWER	MUNICIPAL ELECTRICITY	SCHOOLS	HOSPITAL/ ASSISTED LIVING	CORRECTIONAL FACILITY	COMMERCIAL DEVELOPMENT	INDUSTRIAL DEVELOPMENT	RACE TRACK	AGRICULTURE
Town of Catharine	X	X									X	X		X
Town of Cayuta	X	X									X			X
Town of Dix	X	X	X		X						X	X	X	X
Town of Hector	X	X	X		X						X	X		X
Town of Montour	X	X									X	X		X
Town of Orange	X	X	X					X			X	X		X
Town of Reading	X	X									X	X		X
Town of Tyrone	X	X	X								X			X
Village of Burdett	X	X	X								X			X
Village of Montour Falls	X	X	X		X	X			X		X	X		X
Village of Odessa	X	X	X		X						X	X		X
Village of Watkins Glen	X	X	X	X	X	X	X	X	X		X	X		

| HAZARD IDENTIFICATION |

TABLE 9: Quick Reference Listing of Schuyler County Critical Infrastructure

FACILITY/ INFRASTRUCTURE	LOCATION
COUNTY OFFICES	
Public Safety Building	Village of Watkins Glen [106 10th St]
County Administration	Village of Watkins Glen [105 Ninth St]
Human Services Complex	Village of Montour Falls [323 Owego St]
MUNICIPAL OFFICES	
Town of Catharine	Town of Catharine [5182 Park Road, Odessa, NY]
Town of Cayuta	Town of Cayuta [6360 State Route 224, Cayuta, NY]
Town of Dix	Village of Watkins Glen [304 7th St, Watkins Glen, NY]
Town of Hector	Town of Hector [5097 State Route 227, Burdett, NY]
Town of Montour	Town of Montour [135 Havana Glen Rd, Montour Falls, NY]
Town of Orange	Town of Orange [899 Hornby Road, Beaver Dams, NY]
Town of Reading	Town of Reading [3914 County Route 28, Watkins Glen, NY]
Town of Tyrone	Town of Tyrone [457 County Road 23, Dundee, NY]
Village of Burdett	Village of Burdett [3830 Main St, Burdett, NY]
Village of Montour Falls	Village of Montour Falls [408 W. Main St, Montour Falls, NY]
Village of Odessa	Village of Odessa [300 E. Main St, Odessa, NY]
Village of Watkins Glen	Village of Watkins Glen [303 N. Franklin St, Watkins Glen, NY]
FIRE STATIONS	
Beaver Dams	Town of Dix [1165 County Route 19, Beaver Dams, NY]
Burdett	Village of Burdett [4124 Lake Avenue, Burdett, NY]
Mecklenburg	Town of Hector [4495 County Road 6, Mecklenburg, NY]
Monterey	Town of Orange [1465 South Street, Beaver Dams, NY]
Montour Falls	Village of Montour Falls [111 Lee St, Montour Falls, NY]
Odessa	Village of Odessa [300 East Main St, Odessa NY]
Tyrone	Town of Tyrone [3600 State Route 226, Tyrone, NY]
Valois-Logan-Hector	Town of Hector [5736 State Route 414, Hector NY]
Watkins Glen	Village of Watkins Glen [201 North Perry St, Watkins Glen, NY]
POLICE DEPARTMENTS	
Schuyler County Sheriff's Office	Village of Watkins Glen [106 10th St, Watkins Glen, NY]
New York State Police	Village of Montour Falls [600 College Ave, Montour Falls, NY]
Watkins Glen Police Department	Village of Watkins Glen [303 N. Franklin St, Watkins Glen, NY]
EMERGENCY MEDICAL SERVICES TRANSPORT	
Schuyler County Volunteer Ambulance Corp	Village of Watkins Glen [909 S. Decatur St, Watkins Glen, NY]
HOSPITAL	
Schuyler Hospital	Village of Montour Falls [220 Steuben St, Watkins Glen, NY]
HIGHWAY DEPARTMENTS	
NYS Department of Transportation	Town of Dix [3545 County Route 16, Watkins Glen, NY]
Schuyler County	Village of Watkins Glen [910 S. Decatur St, Watkins Glen, NY]
Town of Catharine	Town of Catharine [106 Grant Rd, Odessa, NY]
Town of Cayuta	Town of Cayuta [6360 State Route 224, Cayuta, NY]
Town of Dix	Town of Dix [2305 County Road 17, Watkins Glen, NY]

| HAZARD IDENTIFICATION |

TABLE 9: Quick Reference Listing of Schuyler County Critical Infrastructure

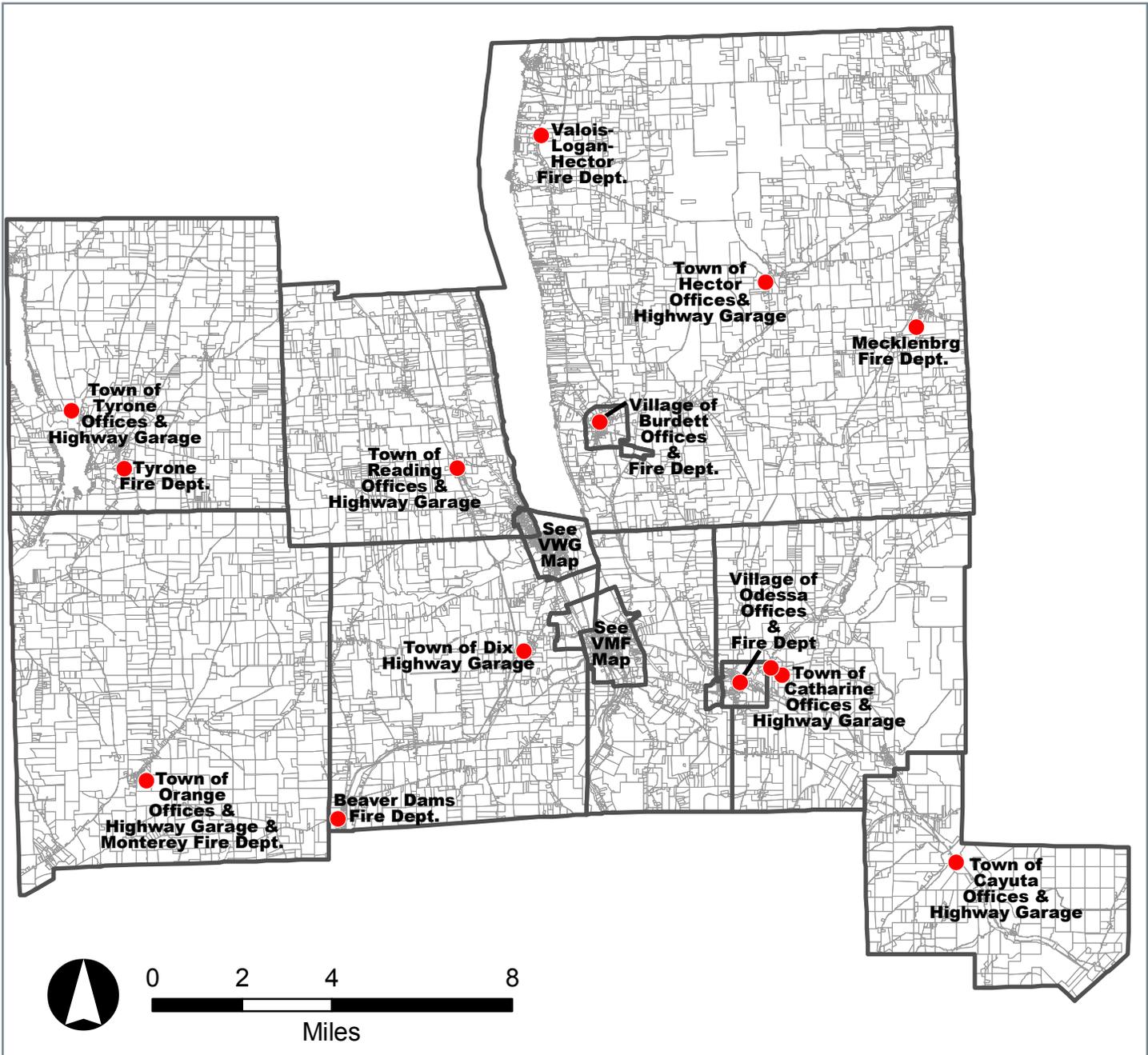
FACILITY/ INFRASTRUCTURE	LOCATION
Town of Hector	Town of Hector [5097 State Route 227, Burdett, NY]
Town of Montour	Town of Montour [135 Havana Glen Rd, Montour Falls, NY]
Town of Orange	Town of Orange [899 Hornby Rd, Beaver Dams, NY]
Town of Reading	Town of Reading [3951 State Route 14A, Watkins Glen, NY]
Town of Tyrone	Town of Tyrone [435 County Road 23, Dundee, NY]
Village of Montour Falls	Village of Montour Falls [195 Cook Street, Montour Falls, NY]
Village of Odessa	Village of Odessa [105 1st St, Odessa, NY]
Village of Watkins Glen	Village of Watkins Glen [910 S. Decatur St, Watkins Glen, NY]
EMERGENCY SHELTERS	
Bradford Central School	Town of Orange [2820 State Route 226, Bradford, NY]
Odessa-Montour Central School	Village of Odessa [300 College Ave, Odessa, NY]
Watkins Glen Central School	Village of Watkins Glen [301 12th St, Watkins Glen, NY]
COMMUNICATIONS	
Emergency Radio Communications	Village of Watkins Glen; Town of Tyrone; Town of Hector; Terry Hill Tower [Chemung County]
Verizon Telephone	Village of Watkins Glen [local switching station]
Trumansburg Telephone	Town of Hector [local switching station]
Empire Telephone	Village of Odessa; Village of Burdett [local switching stations]
Frontier Telephone	Yates County [local switching station]
UTILITIES	
NYSEG Electric System	Town of Montour [substation] Tompkins County, Chemung County [maintenance offices]
Village of Watkins Glen Electric Department and Substation	Village of Watkins Glen
Town of Hector Municipal Water Wells & Storage Tank	Town of Hector
Village of Odessa Municipal Water Wells and Storage Tank	Village of Odessa
Village of Montour Falls Municipal Water Wells & Storage Tank	Village of Montour Falls
Village of Watkins Glen Water Filtration Plant & Storage Tanks	Village of Watkins Glen - serves Village of Watkins Glen and parts of Town of Dix and Town of Reading
CVWRF - Joint Wastewater Treatment Plan	Village of Watkins Glen - serves Village of Watkins Glen, Village of Montour Falls, and parts of the Towns of Dix and Reading
Natural Gas	All switching facilities are in Neighboring Counties
AMERICAN RED CROSS	
Jan Delano Chapter	Chemung County
BROAD CAST MEDIA	
WENY - TV	Chemung County [studio and broadcast tower]
WETM - TV	Chemung County [studio and broadcast tower]
WFLR - Dundee Radio Station	Yates County [studio and broadcast tower]
Spectrum [Time Warner Cable]	Ontario County
Haefele Cable TV	Tioga County
NOAA Weather Radio	NWS [Binghamton], Elmira, Ithaca, Mount Washington [transmitter]

| HAZARD IDENTIFICATION |

TABLE 9: Quick Reference Listing of Schuyler County Critical Infrastructure

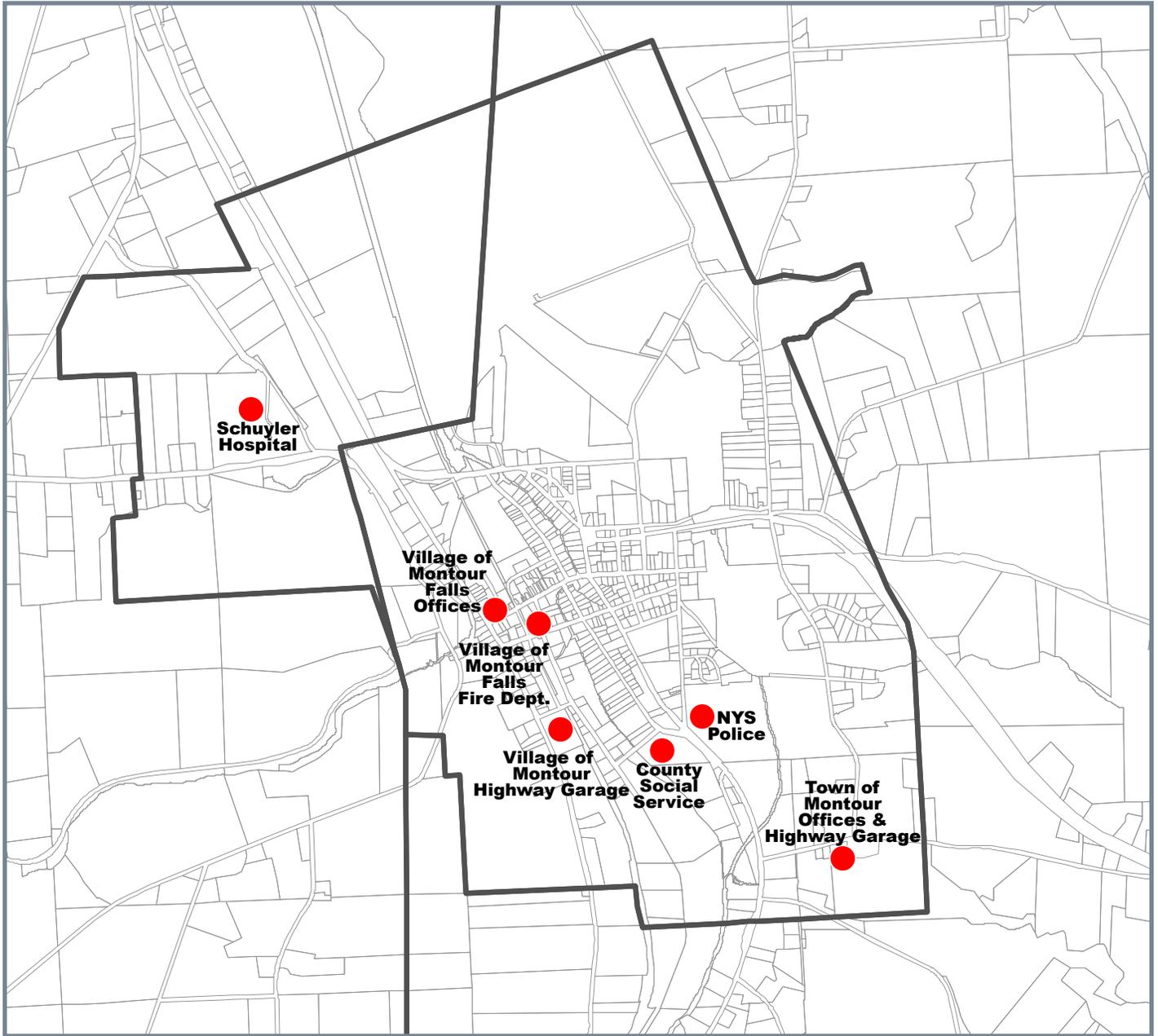
FACILITY/ INFRASTRUCTURE	LOCATION
MAJOR TRANSPORTATION ROUTES	
State Routes 13, 14, 14A, 414, 79, 224, 226, 227, 228, 329, 409	
Elmira - Corning Regional Airport	Chemung County
FACILITIES WITH HAZARDOUS MATERIALS STORAGE	
10 Facilities in Schuyler County have Hazardous Materials inventories meeting the reporting requirements for SARA Title III [2020]	

FIGURE 17: Schuyler County Critical Facilities



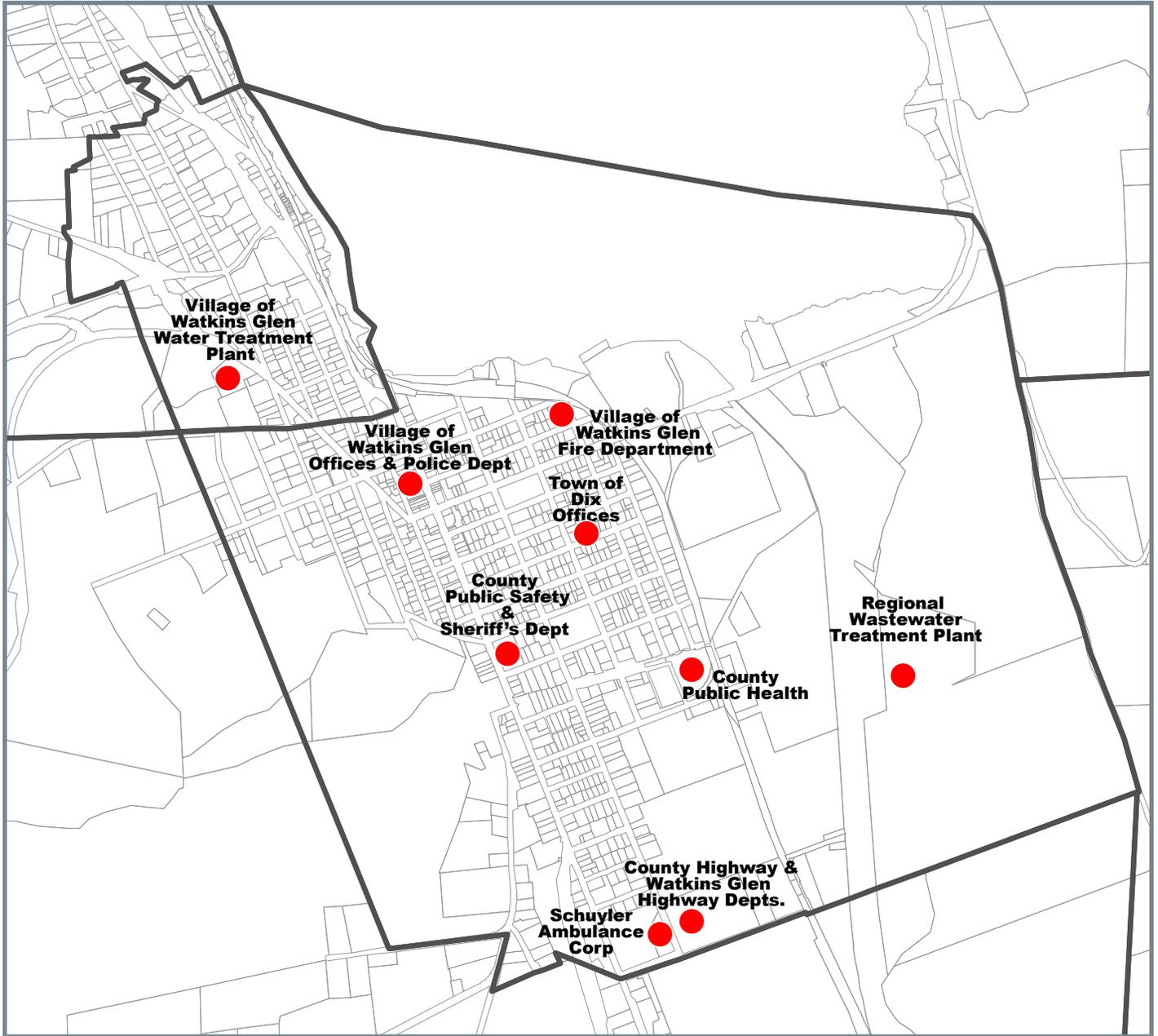
| HAZARD IDENTIFICATION |

FIGURE 18: Critical Facilities - Village of Montour Falls



| HAZARD IDENTIFICATION |

FIGURE 19: Critical Facilities - Village of Watkins Glen



| RISK ASSESSMENT |

To provide a strong foundation for mitigation actions considered Schuyler County considered a full range of hazards that could impact the area and then identified and ranked those hazards that presented the greatest concern. This work included:

- The hazard of concern identification process incorporated input from the county and participating jurisdictions; review of the New York State Hazard Mitigation Plan (NYS HMP 2019);
- The 2016-2021 Schuyler County HMP
- The review of the research and local, state, and federal information.

Information extracting included the frequency, magnitude, and costs associated with the various hazards that have previously, or could feasibly, impact the region.

With threats and hazards identified through the CEPA process as noted in the previous section. It is important to give context to each identified hazard. This section begins with a common threat, Climate Change, a phenomenon which can influence and change many identified hazards in ways not before seen, potentially changing the impact, frequency, time of year, or duration of these hazards. Noted impacts of climate change on certain hazards are discussed in the narrative of those hazards.

The majority of this section comprised of a listing of each hazard identified in the CEPA which could potentially impact Schuyler County [note that the hazards of Severe Winter Storm and Ice Storm have been combined]. For each hazard, the CEPA - identified relative risk score [a function of probability of impact and severity of impact] has been indicated. Along with a narrative description of each hazard, information is provided [where applicable] for past occurrences of the hazard, probability of future events, and potential impacts relative to location and severity.

Frequency of Return Statements	
PROBABILITY	DESCRIPTION
Highly Likely	Event is probable in the next year.
Likely	Event is probable in the next three years.
Occasional	Event is probable in the next five years.
Unlikely	Event is probable in the next ten years.

Impact Statements	
POTENTIAL SEVERITY	DESCRIPTION
Substantial	Multiple deaths. Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major	Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Minor	Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Limited	Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

| RISK ASSESSMENT |

NATURAL RISKS

CLIMATE CHANGE

Climate change is one of the greatest challenges society faces today. The impacts of climate change have seen attention globally and nationally. According to a study sponsored by the New York State Energy and Research and Development Authority [NYSERDA], “Climate change is already beginning to affect New York State, and these impacts are projected to grow.”

Climate change itself is not a hazard, but the effects of climate change tend to alter the frequency and magnitude of our hazards. We already see a trend of sudden deluges of rainfall like never seen before, which cause flash flooding. The continued impacts of climate change could be devastating on Schuyler County’s natural resources and agriculture. The NYSERDA report identifies a number of potential agricultural impacts including “increased insects and diseases, heightened weed pressure, and the effects of excess water and drought.”

While we continue to promote awareness of our carbon footprint through efforts such as the Carbon Calculator, found on the County website, we also recognize that climate change can no longer be prevented. Adaptation to the impacts of climate change are important and we recognize we are not alone in this fight. A multitude of entities at the federal and state level are regularly providing information which can help us adapt.

Cornell University, which has property in Schuyler County where it conducts studies often, is among the leaders of these research efforts. Cornell University, through its research findings and publications, and through direct outreach to farmers through their Cooperative Extension program, offers a number of adaptation strategies for farmers. They suggest adaptations for the dairy and livestock industry that include diet and feeding management; use of fans, sprinklers, and other cooling systems; and enhancement of cooling capacity in housing facilities. For crops, Cornell University suggests adaptations such as shifting planting dates; diversification of crop varieties and crops; chemical and non-chemical control of insects, disease.

According to the NOAA's 2020 Annual Climate Report records show that there has been an increase in climate change over the years and since 1980 the global temperature averages have risen by 0.7 degrees primarily resulting from greenhouse gases. A big focus on limiting greenhouse gas emissions to keep climates close to what scientists refer to as the “Holocene” time period, [a time period during which human civilization was evolved] would help with minimizing extreme heat waves and reducing extreme weather frequencies. The increase in average temperatures have caused more days above 90°F, longer warmer seasons, and a spike in heavier precipitation.

In addition to keeping up with research, many of our identified hazard mitigation projects address the current impacts of climate change that Schuyler County experiences, particularly flooding. County, town, and village departments, aided by the Schuyler County Soil and Water Conservation District, strengthen our adaptation through actions such as reinforced headwalls on bridges and culverts, maintaining and enlarging culverts, and proper streambed maintenance.

| RISK ASSESSMENT |

FLOODING [RELATIVE RISK SCORE: 16]

Flooding is the most significant concern for Schuyler County. In addition to the flooding events that received federal disaster declarations, severe flooding occurred in both July and October of 1970, June of 1976, June of 2015, and August of 2018.

Flash floods are characterized by a rapid rise in water level, high velocity, and large amounts of debris. They are capable of tearing out trees, undermining buildings, and scouring new channels. Major factors causing flash flooding are the intensity and duration of rainfall, the steepness of the watershed, and stream gradients. The soil types, watershed vegetation, natural and artificial flood water storage areas, and the configuration of the streambed and floodplain are also important.

The soils and topography of Schuyler County make it very susceptible to flash flooding and water quickly runs off from higher elevations, traverses down steeper terrain, and collects in lower elevation areas. A detailed soil survey of Schuyler County, produced by the USDA, can be found at: https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/new_york/NY097/0/Schuyler.pdf.

When thunderstorms, tropical storm systems, or other weather patterns produce intense rainfall or rapid snowmelt, water rushes down the hillsides into drainage ditches and streams. Streams respond quickly and may overflow into their floodplains with little or no warning. Flash flood damages result from both inundation by floodwater and erosion of drainage ways and stream channels [fluvial erosion].

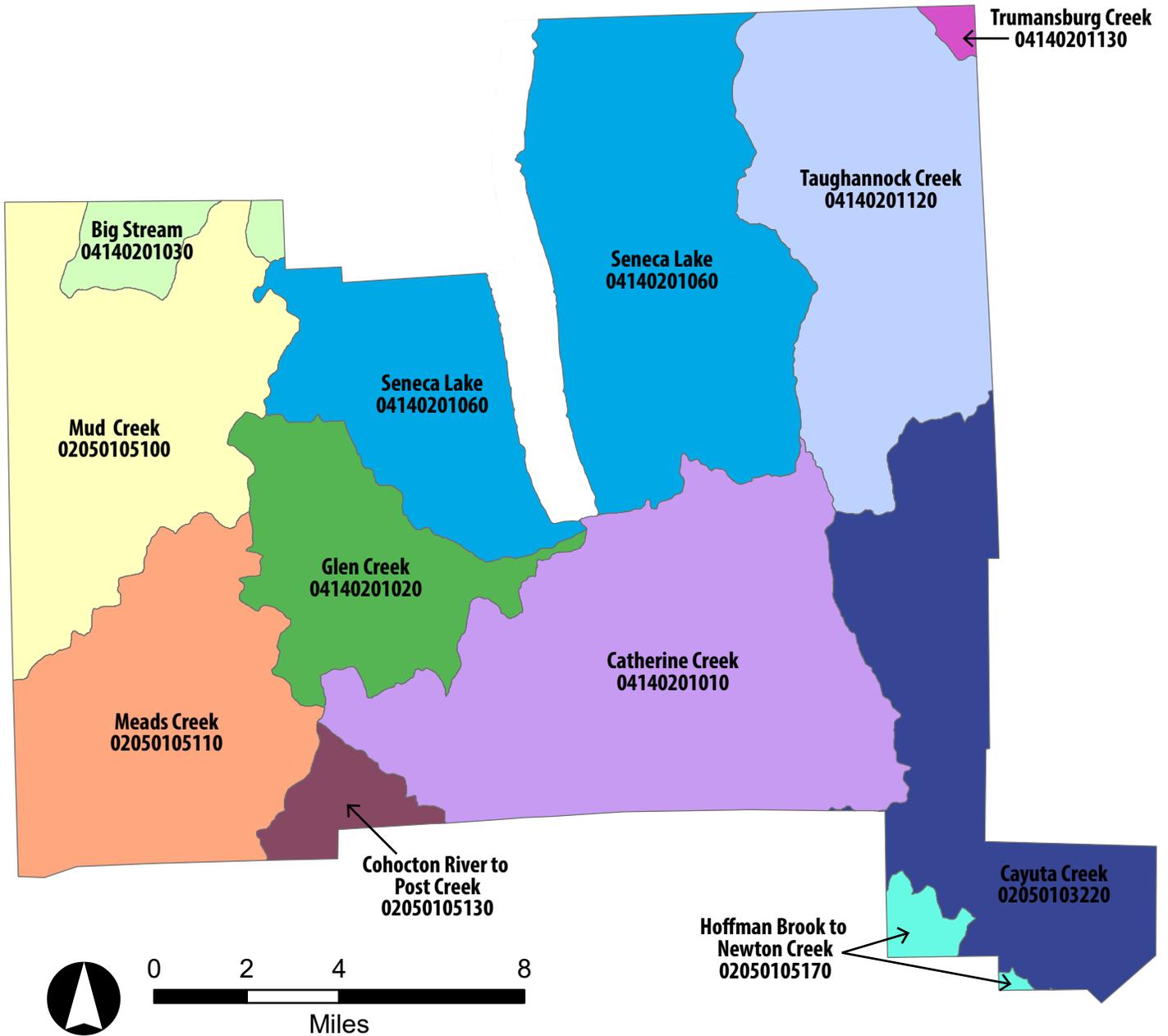
All of Schuyler County's streams have relatively small watersheds, which fill quickly with heavy rainfall events. As a result, flood conditions develop rapidly, with little warning, and are classified as flash flooding. Flooding of the county's lakes, particularly Seneca Lake, develops more slowly, occurs less frequently, and is not included in this discussion of flash flooding.

Erosion of stream banks and drainage ways during flash flooding is a major concern. The severity of erosion problems is due, in part, to the widespread occurrence of poorly consolidated glacial deposits, which are particularly susceptible to erosive forces. The high gradients of streams flowing down steep slopes provide the energy needed for fluvial erosion and the transport of bank materials. In addition, disturbance of natural stream beds and floodplains can lead to adjustments within the stream system that cause increased erosion and/or deposition. Examples of such disturbances are: channel straightening, dredging, bridge/culvert installation, berms along a stream [which limited flow into the floodplain], removal of stabilizing vegetation along a stream, and filling of floodplains. In addition, land use changes in the watershed can alter the delivery of water and sediment to the stream and thus contribute to imbalances in the stream system. Stream adjustments and the resulting erosion, whether natural or human-caused, are often accelerated during flood events.

For reference, Figure 20 identifies watershed basins found within Schuyler County and Figure 21 identifies the waterbodies and floodplain areas located within Schuyler County.

| RISK ASSESSMENT |

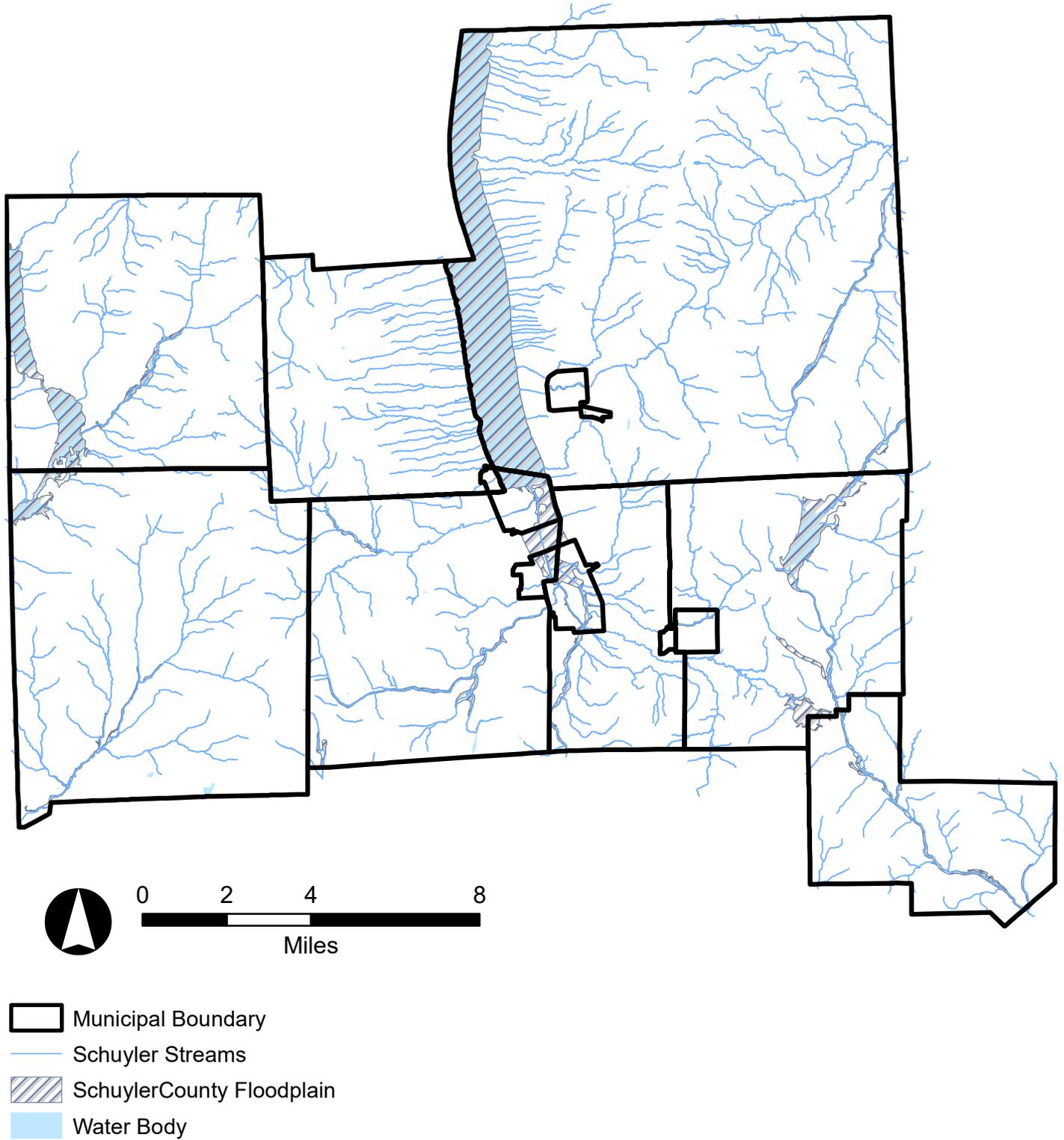
FIGURE 20: Schuyler County - Watershed Basins



source: Schuyler County Planning Department

| RISK ASSESSMENT |

FIGURE 21: Schuyler County - Waterbodies and Flood Plains



source: Schuyler County Planning Department

| RISK ASSESSMENT |

PAST OCCURRENCES

The most severe flooding in Schuyler County occurred during the “Finger Lakes Flood” in July 1935 and the Tropical Storm Agnes Flood in June 1972:

- July 1935, Finger Lakes Flood: A complex of thunderstorms produced flash flooding that washed out numerous roads and bridges. Debris lodged on a railroad trestle in Glen Creek and then broke loose, sending a wall of water through the Village of Watkins Glen. Homes and businesses were destroyed and extensive mud deposits were left in houses and other buildings in the Villages of Watkins Glen and Montour Falls.
- June 1972, Tropical Storm Agnes: The inland remnants of Hurricane Agnes dropped 12 to 18 inches of rain in a three day period across the mid-Atlantic states. The resulting flood caused an estimated \$7.2 million in damages in Schuyler County.

The NOAA National Climatic Data Center [NCDC] database lists 18 flood events that impacted Schuyler County in the over 20 years of data from 1995 through 2019. Four of these events [January 1996, November 1996, August 2003 and October 2012] were federally declared disasters. Brief descriptions follow. [Sources: NOAA National Climatic Data Center, Storm Event Database; local reports]

TABLE 10: NOAA NCDC Storm Event Database - Flood and Flash Flood 1995-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Monterey [Orange]	5/10/2000	Flash Flood	\$ -
South Portion of County	7/22/2003	Flash Flood	\$ 3,000,000.00
Beaver Dams [Dix]	4/2/2005	Flash Flood	\$ 50,000.00
Monterey [Orange]	6/10/2005	Flash Flood	\$ 50,000.00
Countywide	11/29/2005	Flood	\$ 10,000.00
Burdett	6/27/2006	Flash Flood	\$ 15,000.00
Tyrone	8/10/2008	Flash Flood	\$ -
Wedgewood [Dix]	9/7/2011	Flash Flood	\$ 10,000.00
Countywide	8/9/2013	Flash Flood	\$ 50,000.00
Watkins Glen	6/14/2015	Flash Flood	\$2,600,000.00
Tyrone	6/14/2015	Flash Flood	\$2,600,000.00
Watkins Glen	4/20/2017	Flash Flood	\$10,000.00
Hector	8/14/2018	Flash Flood	\$75,000.00
Monterey [Orange]	6/19/2019	Flash Flood	\$2,000.00

Description of Past Occurrences

- May 10, 2000 – Pine Creek flooded CR 22 in the Town of Orange.
- July 22, 2003 – Nearly stationary thunderstorms dumped between 2 and 3 inches of rain in less than 3 hours across the southern half of Schuyler County. Two-day rainfall totals were 3 and 6 inches. The heaviest rain fell across Monterey, Townsend, Montour Falls, Beaver Dams, Watkins Glen, and Odessa. The heavy rain caused flash flooding that closed many roads, and created several mudslides. In the Town of Dix, just west of Watkins Glen International Speedway, a bridge was washed out on County Route 16. Estimated property damage: \$3 million.
- April 2-3, 2005, Beaver Dams – A slow moving storm from the Ohio Valley brought 1 to 4 inches of rain over two days. Before this storm, streams had high flows due to a previous rainstorm and snowmelt. There were some road closures and flooded basements. A few streams and creeks came out of their banks. Estimated property damage: \$50,000.
- June 10, 2005, Monterey – Slow moving thunderstorms with heavy rain caused flash flooding. Several roads were closed. A mobile home was knocked off its foundation from flowing water. Emergency personnel conducted one swift water rescue. One bridge was destroyed and another bridge damaged. Estimated property damage \$50,000.
- November 29-30, 2005 – 1 to 3 inches of rain caused urban and minor flooding. Route 14 just north of Watkins Glen was closed when water lifted part of the road surface. Several homes in Watkins Glen, Burdett, and Reading Center had water pumped out of their basements.

| RISK ASSESSMENT |

- September 7-8, 2011 – Remnants of Tropical Storm Lee with heavy rain caused minor flooding in the western side of Schuyler County. Road flooding was reported on State Route 14 between Watkins Glen and Montour Falls. One lane is covered for about 100 feet. Several homes in Odessa, Mecklenburg, Burdett, and Montour Falls had to have their basements de-watered. One resident of the village of Odessa was electrocuted in her basement as she attempted to operate the basement sump-pump.
- October 29, 2012 - Hurricane Sandy made land fall in southern NY had very little impact to our county.
- August 9, 2013 – Thunderstorms with heavy rain caused flash flooding, causing short term road closures. Two trailers in The Town of Hector had to be evacuated causing property damage estimated at \$50,000.
- June 14, 2015 - Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, other businesses were flooded in the Town of Tyrone.
- July 20, 2017 - Flash flooding spilled across several streets in the Village of Watkins Glen and nearby county roads. There was a report of 2 feet of water in one intersection.
- August 14, 2018 - Several rounds of heavy rain producing thunderstorms which caused severe flash flooding and major damages in several locations. Many roads flooded and damaged by severe flash flooding throughout the County. In the Town of Hector people were trapped in homes and required rescuing.
- June 19, 2019 - Torrential rain producing thunderstorms over portions of the county dropping 2 to 5 inches of rainfall in less than 2 hours. Numerous streams, creeks and roads were flooded in the Monterey area.

In addition to these flood events, additional heavy rainfall events have caused localized drainage problems, ponding, stream bank erosion, roadway damage, and other difficulties.

PROBABILITY OF FUTURE EVENTS & CLIMATE CHANGE

Flooding can be caused by excessive precipitation, rapid snowmelt, ice jams, beaver dams, or dam failure. Urban or street flooding can result from heavy precipitation, clogged storm sewers, or a ruptured water main. Flooding can occur at any time of year. Based on historic flood events, the probability of future flooding in New York and Schuyler County is highly likely due to the effects of climate change. According to the NOAA, sea level has been rising over the past century, and in recent years the pace has increased significantly. Given the history of occurrences, climate change, and sea level rise, it is probable that flood hazard events will become more frequent throughout New York State.

According to the NYSERDA ClimAID Climate Risk Information Supplement [2014], regional precipitation across Region 3 of New York State within the middle range [25th-75th percentile] is projected to increase by approximately 1-7 percent by the 2020s, 4-10 percent by the 2050s, and 6-14 percent by the 2080s [Table 11]. By the end of the century, the greatest increases in precipitation are projected to be in the northern parts of the State. Although seasonal projections are less certain than annual results, much of this additional precipitation is projected to occur during the winter months. During the late summer and early fall, in contrast, total precipitation is slightly reduced in many climate models. In general, the projected changes in annual precipitation in the global climate models associated with increasing greenhouse gases are small relative to year-to-year variability.

TABLE 11: Mean Annual Precipitation Change - Region 3 - Southern Tier [Data: NYSERDA]

BASELINE [1971-2000] 34.0 INCHES	LOW ESTIMATE [10TH PERCENTILE]	MIDDLE RANGE [25TH TO 75TH PERCENTILE]	HIGH ESTIMATE [90TH PERCENTILE]
2020s	- 4 percent	+ 1 to + 7 percent	+ 9 percent
2050s	+ 2 percent	+ 4 to + 10 percent	+ 15 percent
2080s	+ 3 percent	+ 6 to + 14 percent	+ 16 percent
2100	- 2 percent	+ 5 to + 20 percent	+26 percent

| RISK ASSESSMENT |

Additionally, five dams have been identified through New York State Department of Environmental Conservation Bureau of Flood Protection and Dam Safety surveys which could significantly impact Schuyler County residents and infrastructure. Three of these dams have been categorized as a hazard code C [high downstream hazard], while two have been categorized as a hazard code B [intermediate downstream hazard]. Table 12 provides details on each of these dams.

TABLE 12: Dams of Concern in Schuyler County [Data: NYS DEC]					
DAM NAME	STATE ID	TOWNSHIP	OWNER	INSPECTION DATE	HAZARD CODE
Glen Creek Dam	060-2567	T/Dix	NYS Parks and Recreation – Finger Lakes	9/19/2019	C
Punch Bowl Dam	060-4405	T/Dix	NYS Parks and Recreation – Finger Lakes	9/19/2019	C
Tyrone Power Company Dam	054-1596	T/Tyrone	Ronald Robertson and Danielle Hepner	9/19/2019	C
Whites Hollow Dam	060-4408	T/Dix	NYS Parks and Recreation – Finger Lakes	9/19/2019	B
Montour Falls Reservoir Dam	060-0769	T/Montour	Village of Montour Falls	9/19/2019	B

National Flood Insurance Program Data

All Schuyler County municipalities participate in the National Flood Insurance Program [NFIP]. Current NFIP policy information is listed in Table 13. NFIP claim information since January 1978 is listed in Table 14. There are no properties within Schuyler County classified by the NFIP as “repetitive loss properties”. These flood insurance statistics represent only a small fraction of the properties that are at risk of flash flooding. Many property owners do not carry flood insurance and many damages [particularly to basements and basement contents] are not covered. Schuyler County municipalities have difficulty enforcing NFIP floodplain management regulations.

Of concern, as noted in the New York State Hazard Mitigation Plan [2019], is that the ratio of residential properties in Schuyler County as compared to the number of NFIP policies is extremely high [3.72]. Additionally, as noted in the same document, the ratio of residential values to NFIP insurance coverage in Schuyler County is over 4.0, indicating a significant disparity in property value relative to insurance coverage.

All municipalities in Schuyler County for which FEMA has identified Special Flood Hazard Areas [SFHAs] have adopted floodplain management requirements that apply to new construction, substantial improvements, and other development within the mapped SFHA. The only exception is the Town of Reading, which has no Flood Insurance Rate Map [FIRM]. For at least one project on Seneca Lake, the Town of Reading did enforce floodplain management requirements based upon the Base Flood Elevation [BFE] for Seneca Lake in the Village of Watkins Glen.

Floodplain management requirements are in the New York State Residential and Building Codes, which are adopted and enforced by all municipalities. The Residential Code has high standards of elevating and protecting to two feet above BFE. This freeboard would only apply to areas where there is a BFE, namely the Seneca Lake area, and some of the streams in the Villages of Watkins Glen and Montour Falls.

| RISK ASSESSMENT |

To aid in consistency of enforcement, the Flood Mitigation Specialist from the Southern Tier Central [STC] Region Planning and Development Board provides training locally. They have also created a series of fact sheets about floodplain development requirements which are available on the STC website [www.stcplanning.org]. Recent training has included:

- April 2015 STC Regional Leadership Conference – “National Flood Insurance Program: Flood Maps, Determinations, and Letters of Map Change”
- January 2015 – “Flooding: Municipal Responsibilities and Opportunities” at STC Planning School followed by Green Infrastructure training
- November 2014 – “No Adverse Impact Floodplain Management” at Finger Lakes Research Conference. Attendees included members of the Lamoka-Waneta Lakes Association
- August 2014 – Floodplain management training for the Schuyler County Planning Commission
- April 2014 STC Regional Leadership Conference – “FEMA Elevation Certificates”. Attendees included Town of Tyrone, Town of Orange, and Village of Odessa.
- April 2013 STC Regional Leadership Conference – “No Adverse Impact Floodplain Management”
- April 2012 STC Regional Leadership Conference – “Introduction to the National Flood Insurance Program”

The STC has also offered training in stormwater management, roadway drainage, emergency response, stream management, and other relevant topics for the STC Regional Leadership Conference and other venues.

FEMA undertook the Discovery process for a Risk MAP project in the Seneca [Finger Lakes] Watershed. The Discovery Report was completed in June 2015 and is available at: <https://rampp-team.com/ny/htm>. The mapping requests documented as part of this process are located in the appendices of the report. The Recommended Scope of Work by NYS DEC identifies an updated lake study for Seneca Lake with BFE as the highest priority study request in the watershed. It also notes that Schuyler County “would greatly benefit from countywide modernized FIRMs. Schuyler County maps are outdated flat maps from the 1970s that have little detail and a scale that makes them difficult for community officials to use for enforcing NFIP regulations”. The creation of new FIRMs, however, was not included in DEC’s proposed scope of work.

The STC indicates few requests for floodplain management assistance in Schuyler County, likely due to infrequent development in the mapped floodplains. Of note are the following requests for assistance:

- Town of Dix - Currently considering updating their floodplain regulations in conjunction with other zoning revisions
- Town of Reading – STC assisted the town and architect with a project on Green Point Road
- Town of Tyrone – STC assisted the code enforcement officer
- Village of Watkins Glen – STC assisted the county planner with a redevelopment project at Clute Park
- STC has answered various questions from property owners about map determinations and flood insurance, primarily on Lamoka and Waneta Lakes

TABLE 13: NFIP Policy Statistics for Schuyler County [FEMA, 2021]

COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Catharine	3	\$241,500	\$2,642
Town of Cayuta	2	\$185,400	\$4,270
Town of Dix	1	\$70,000	\$269
Town of Hector	18	\$4,897,000	\$9,218
Village of Montour Falls	8	\$3,425,100	\$13,520
Town of Montour	1	\$246,800	\$3,229
Town of Orange	2	\$137,700	\$1,784
Town of Reading	2	\$630,000	\$905
Town of Tyrone	14	\$1,971,400	\$13,725
Village of Watkins Glen	6	\$2,360,000	\$4,778
TOTALS	57	\$14,164,900	\$54,340

| RISK ASSESSMENT |

TABLE 14: NFIP Claims for Schuyler County 1978-2020 [FEMA, 2020]

COMMUNITY	TOTAL LOSSES	CLOSED LOSSES	OPEN LOSSES	CLOSED WITHOUT PAYMENT	TOTAL PAYMENTS
Town of Dix	2	2	0	0	\$3,712.00
Town of Hector	10	8	0	2	\$55,000.00
Town of Montour	1	0	1	0	\$0.00
Village of Montour Falls	7	7	0	0	\$78,096.18
Town of Orange	18	11	0	7	\$122,000.00
Town of Reading	2	1	0	1	\$6,206.00
Town of Tyrone	1	1	0	0	\$233.00
Village of Watkins Glen	12	8	0	4	\$52,767.86
TOTALS	51	38	0	13	\$317,910.36

POTENTIAL IMPACT – LOCATION

Flood hazard areas are identified on Flood Insurance Rate Maps [FIRMs] for all Schuyler County municipalities except the Town of Reading [for which no hazard areas were identified, despite obvious risks along the shoreline of Seneca Lake]. These maps are on file in each municipality and in county offices [Emergency Management Office, Soil and Water Conservation District, and Planning Department].

The floodplain areas delineated on the FIRMs do not represent all of the areas threatened by flooding in Schuyler County. Most of the designated floodplains were delineated using approximate methods and are thus subject to inaccuracies. For example, the detailed hydraulic analyses that were conducted for streams in Watkins Glen and Montour Falls were based on the assumption of unobstructed flow and are thus considered valid only if all channels and drainage structures remain unobstructed, operate properly, and do not fail. If these conditions do not exist, the impact of 100-year flooding could be greater. In addition, the potential for flooding from the numerous smaller streams in the county was not evaluated when the Flood Insurance Rate Maps were prepared. Yet these streams have floodplains and pose flood hazards. Because there is no floodplain designated on the FIRMs, development along these streams is not regulated by the local laws for flood damage prevention. Yet development in these areas is at risk from both flooding and stream bank erosion.

Although past flood events can indicate what to expect, the locations of damage differ depending on the characteristics of each storm event, the locations of debris accumulation, and current land use patterns. For example, flood damages have repeatedly occurred downhill of timber harvesting operations, where removal of tree cover, construction of roads and skid trails, and/or disruption of stream channels have altered the local hydrology. Likewise, development activities can increase the risk of flash flooding due to the hydrologic changes associated with the removal of natural vegetation, grading [which generally increases the rate of runoff], the addition of impervious surfaces [which results in more runoff], and other changes to local drainage pattern.

| RISK ASSESSMENT |

The areas at risk from flash flooding are not limited to floodplains threatened by streams. Significant damages can also occur by rushing water finding its way into streams. Roads are particularly susceptible to erosion damage due to altered drainage patterns. During flash flood events, buildings located far from the floodplain can be damaged by overland flow. For example, houses in the North Falls Road area in the Town of Hector are located above the 100-year floodplain for Seneca Lake but have been repeatedly damaged by water draining down the steep slope into the lake. Flood damage also occurs when water backs up at storm drains and culverts, either because the capacity of the structure is insufficient or because it is blocked by flood debris.



Culvert Erosion, June 2015
photo credit: Schuyler County Emergency Management

Lakeshore areas are a particular concern due to the steep slopes, shallow soils, and dense development of lakeside cottages, which constrain drainage in many areas. In some locations, this is compounded by poor design or inadequate maintenance of access roads, many of which are privately owned. Poor drainage in these areas can contribute to the erosion of yards and driveways, flooding of homes, and road damage. In addition, the shores of the County's four major lakes are densely developed: Seneca Lake [Towns of Reading and Hector, Village of Watkins Glen], Waneta Lake [Town of Tyrone], Lamoka Lake [Towns of Orange and Tyrone], and Cayuta Lake [Town of Catharine].



Clean up after August 2018 Flash Flooding along Seneca Lake shoreline
photo credit: Schuyler County Emergency Management

An additional concern is Glen Creek within the Village of Watkins Glen. The concrete walls along both banks of Glen Creek [from Franklin Street to Decatur Street] are in poor condition and have been damaged in places. If a section of the wall collapses, it could block flow within Glen Creek and cause flooding of an extensive area of residential and commercial development. Therefore, the Village is seeking funding to repair these walls. The conditions contributing to flash flood risks in each municipality are summarized in Table 15. Given the range of localized conditions that can increase susceptibility to flash flooding, it is not possible to delineate, with any level of certainty, the areas within Schuyler County that are at risk from flash flooding. The risks are highest for development located near streams, bridges, ditches, storm drains, and other drainage structures. These risks are increased for streams and drainage structures that are unstable or are not adequately maintained. In addition, indirect damages resulting from washed-out roads/driveways, damaged power lines, and water supply/sewer problems. The flooding, erosion, and infrastructure damages that result from flash floods are, therefore, a countywide concern.

| RISK ASSESSMENT |

Table 15 identifies the flash Flood Risk for Each Municipality [Schuyler County EMO, 2021]

TABLE 15: Flash Flood Risk for Each Municipality [Schuyler County EMO, 2021]							
MUNICIPALITY	REGULATED FLOODPLAIN [FROM FIRM DATA]	DEVELOPMENT WITH REGULATED FLOODPLAIN	MARINAS	STREAMS PRONE FOR FLASH FLOODING	STEAMS PRONE TO FLUVIAL EROSION	LAKESHORE FLOODING/ LAKESHORE DRAINAGE	ROADSIDE DRAINAGE/ STORM DRAINS
Town of Catharine	X	X		X	X	X	X
Town of Cayuta	X	X		X	X		X
Town of Dix	X	X		X	X		X
Town of Hector	X	X		X	X	X	X
Town of Montour	X	X		X	X		X
Town of Orange	X	X		X	X	X	X
Town of Reading				X	X	X	X
Town of Tyrone	X	X		X	X	X	X
Village of Burdett	X			X	X		
Village of Montour Falls	X	X	X	X	X		X
Village of Odessa	X	X		X	X		X
Village of Watkins Glen	X	X	X	X	X	X	X

Table 16 identifies, per jurisdiction, the value of these parcels based upon 2021 assessment values. Compared to Table 14, there exists a significant disparity between the amount of flood insurance and the assessed value of parcels for each jurisdiction.

TABLE 16: Values of Parcels within 100-yr - Floodplain [Schuyler County Real Property, 2020]		
JURISDICTION	# OF PARCELS WITHIN 100 YEAR FLOODPLAIN	VALUE OF PARCELS WITHIN 100 YEAR FLOODPLAIN
Village of Burdett	28	\$1,975,200.00
Town of Catharine	168	\$24,931,500.00
Town of Cayuta	73	\$12,719,000.00
Town of Dix	140	\$21,661,100.00
Town of Hector	177	\$38,197,800.00
Town of Montour	51	\$3,610,700.00
Village of Montour Falls	151	\$20,867,600.00
Village of Odessa	32	\$2,315,000.00
Town of Orange	109	\$11,763,000.00
Town of Reading	110	\$34,138,127.00
Town of Tyrone	413	\$50,207,800.00
Village of Watkins Glen	86	\$40,655,000.00
TOTALS	1538	\$263,041,827.00

| RISK ASSESSMENT |

POTENTIAL IMPACT – SEVERITY

Flooding is the number one weather-related killer, causing an average of three to four deaths per year in New York. Approximately half of those deaths involve people trapped in cars. Although Schuyler County has no history of flood deaths, it does have conditions similar to those in which tragedies have occurred. For example, bridge damage and washed-out roadways can result in cars being swept away. In addition, Schuyler County has several steep gorges, similar to the one in Steuben County, where two people drowned during flash flooding in June 2006. Based on this analysis, Schuyler County has a substantial potential for severe impact.

Annual economic losses in New York State due to flooding are estimated to be as high as 100 million dollars. Collateral losses, such as disruption of commerce, unemployment due to flooded workplaces and inundated transportation systems, expenses for disaster relief and cleanup, and other related costs, the impacted community may experience a slow, long-term recovery, or in a catastrophic disaster, the local economic loss may be permanent.

The destructive power of flash floods can damage or destroy buildings, cars, utility poles, gas lines, roads, bridges, etc. Transportation and communication systems can be interrupted. Drinking water can be contaminated. Electric power and sewage treatment can be disrupted. Floodwaters often carry damaging debris, which can pose a risk to both life and property. Erosion of stream banks and road ditches has historically caused significant damage to roads and bridges in Schuyler County. Accelerated stream bank erosion also leads to the loss of lawns and agricultural land and may undermine buildings. Eroded sediment is subsequently deposited in stream channels, on floodplains, or in downstream lakes. Sediment and debris accumulation can plug culverts and lodge under bridges, displacing the flow of water. Additional hazards that a flood event may trigger include hazardous material release, transportation accidents, power failure, fuel shortage, water supply contamination, food shortage, landslide, disease, and dam failure. The damages and consequent recovery time from widespread flash flooding can be extensive.

The New York State Hazard Mitigation Plan, through the FEMA HAZUS model, has calculated potential losses in a 100-year flood event for Schuyler County. The results are as follows:

- Building Related Economic Loss: \$35,610,000
- Building Related Business Loss: \$480,000
- Building Economic Loss as a % of Exposure: 2.69%
- Debris [in tons]: 5,648
- Shelter Requirements: 5,648
- Fire Stations With at Least Substantial Damage: 1
- Police Stations With at Least Substantial Damage: 2
- Schools With at Least Substantial Damage: 1

Schuyler County has a strong partnership with the Schuyler County Soil and Water Conservation District; the Southern Tier Central Regional Planning and Development Board; and Environmental Emergency Services, Inc. [EES], which is a regional not-for-profit operating a flood warning service for Chemung, Schuyler, and Steuben counties. These partnerships strengthen our ability to address this high-priority hazard.

Schuyler County will continue to advocate, participate and support EES and their important functions of flood detection and warnings; drought monitoring; Chemical Hazard Information Technical Support (CHIT); and Public Information and Education (PIE). The Flood Warning Service (FWS) provides a centralized point for data collection, analysis, and distribution for both flood and drought conditions in Chemung, Schuyler, and Steuben Counties.

| RISK ASSESSMENT |

SEVERE WIND/TORNADO [RELATIVE RISK SCORE: 16]

Severe storms include windstorms, hailstorms, severe thunderstorms, and tornado's which are defined below.

- **Wind Storms:** Wind begins with differences in air pressures and occurs through rough horizontal movement of air caused by uneven heating of the earth's surface. Wind occurs at all scales, from local breezes lasting a few minutes to global winds resulting from solar heating of the earth. High winds are often associated with other severe weather events such as thunderstorms, derechos, tornadoes, nor'easters, hurricanes, and tropical storms.
- **Hailstorms:** Hail forms inside a thunderstorm where there are strong updrafts of warm air and downdrafts of cold water. If a water droplet is picked up by the updrafts, it can be carried well above the freezing level. Water droplets freeze when temperatures reach 32°F or colder. As the frozen droplet begins to fall, it may thaw as it moves into warmer air toward the bottom of the thunderstorm. However, the droplet may be picked up again by another updraft and carried back into the cold air and re-freeze. With each trip above and below the freezing level, the frozen droplet adds another layer of ice. The frozen droplet, with many layers of ice, falls to the ground as hail. Most hail is small and typically less than two inches in diameter (NWS 2010).
- **Thunderstorm:** A thunderstorm is a local storm produced by a cumulonimbus cloud and accompanied by lightning and thunder (NWS 2009). A thunderstorm forms from a combination of moisture; rapidly rising warm air; and a force capable of lifting air, such as a warm front, cold front, a sea breeze, or a mountain.
- **Tornado:** A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 250 miles per hour (mph). Damage paths can be greater than 1 mile wide and 50 miles long. Tornadoes typically develop from either a severe thunderstorm or hurricane as cool air rapidly overrides a layer of warm air.

Although tornadoes grab headlines due to their swift and destructive nature, the more common by-products of thunderstorms are flash floods, lightning, straight-line winds, and hail, which result in many more deaths and millions of dollars in damage each year. A National Weather Service Meteorologist noted that straight-line winds are often more damaging than the tornadoes we can expect in this area. Because flash flooding was evaluated as a separate hazard, the following assessment focuses on the potential for wind, lightning, and hail damage from severe summer storms.

PAST OCCURRENCES

New York experiences an average of 323 severe thunderstorms each year. Nine to ten people per year die from thunderstorm winds, usually due to trees falling on a house or car.

Table 17 contains data from the NOAA National Climatic Data Center [NCDC] on wind events from 2005 through 2020.

TABLE 17: Schuyler County Sever Wind Events 2005-2020 [NOAA, NCDC 2020]				
LOCATION	DATE	EVENT	MAGNITUDE	PROPERTY DAMAGE
Cayuta	6/6/2005	Thunderstorm Wind	50	\$ 10,000.00
Watkins Glen	6/6/2005	Thunderstorm Wind	50	\$ 10,000.00
Monterey	6/10/2005	Thunderstorm Wind	50	\$ 10,000.00
Tyrone	7/26/2005	Thunderstorm Wind	50	\$ 2,000.00
Mecklenburg	9/29/2005	Thunderstorm Wind	50	\$ 1,000.00
Countywide	11/6/2005	Thunderstorm Wind	50	\$ 20,000.00
Countywide	11/29/2005	Strong Wind	50	\$ 5,000.00
Odessa	7/29/2006	Thunderstorm Wind	50	\$ 1,000.00
Tyrone	7/8/2007	Thunderstorm Wind	50	\$ -
Cayuta	7/9/2007	Thunderstorm Wind	50	\$ -
Cayuta	7/10/2007	Thunderstorm Wind	50	\$ -

| RISK ASSESSMENT |

TABLE 17: Schuyler County Sever Wind Events 2005-2020 [NOAA, NCDC 2020]

LOCATION	DATE	EVENT	MAGNITUDE	PROPERTY DAMAGE
Watkins Glen	8/24/2007	Thunderstorm Wind	50	\$ 1,000.00
Beaver Dams	8/25/2007	Thunderstorm Wind	50	\$ 1,000.00
Watkins Glen	10/9/2007	Thunderstorm Wind	50	\$ 1,000.00
Watkins Glen	6/21/2008	Thunderstorm Wind	50	\$ -
Reynoldsville	7/17/2008	Thunderstorm Wind	50	\$ -
Watkins Glen	5/16/2009	Thunderstorm Wind	50	\$ -
Catharine	6/25/2009	Thunderstorm Wind	50	\$ 2,000.00
Burdett	8/18/2009	Thunderstorm Wind	50	\$ -
Watkins Glen	5/3/2010	Thunderstorm Wind	56	\$ 5,000.00
Countywide	2/18/2011	High Wind	50	\$ 30,000.00
Catharine	4/27/2011	Thunderstorm Wind	60	\$ 60,000.00
Montour Falls	4/27/2011	Thunderstorm Wind	60	\$ 5,000.00
Hector	7/25/2011	Thunderstorm Wind	55	\$ -
Watkins Glen	7/7/2012	Thunderstorm Wind	50	\$ 5,000.00
Tyrone	4/19/2013	Thunderstorm Wind	50	\$ 5,000.00
Montour Falls	4/19/2013	Thunderstorm Wind	50	\$ 1,000.00
Burdett	6/24/2013	Thunderstorm Wind	50	\$ 2,000.00
Montour Falls	7/8/2014	Thunderstorm Wind	50	\$ 20,000.00
Reading	7/13/2014	Tornado	EF1	\$ 50,000.00
Tyrone	6/8/2015	Thunderstorm Wind	50	\$ 5,000.00
Altay	6/12/2015	Thunderstorm Wind	50	\$ 5,000.00
Watkins Glen	6/12/2015	Thunderstorm Wind	65	\$ 10,000.00
Hector	8/16/2016	Thunderstorm Wind	50	\$ 2,000.00
Alpine	5/1/2017	Thunderstorm Wind	50	\$ 7,000.00
Tyrone	6/18/2017	Thunderstorm Wind	55	\$ 4,000.00
Catharine	6/18/2017	Thunderstorm Wind	55	\$ 4,000.00
Reynoldsville	6/18/2017	Thunderstorm Wind	55	\$ 4,000.00
Beaver Dams	6/18/2017	Thunderstorm Wind	60	\$ 8,000.00
Watkins Glen	7/20/2017	Thunderstorm Wind	50	\$ 3,000.00
Cayuta	7/20/2017	Thunderstorm Wind	50	\$1,000.00
Hector	6/13/2018	Thunderstorm Wind	50	\$ 15,000.00
Watkins Glen	6/18/2018	Thunderstorm Wind	50	\$ 10,000.00
Odessa	7/16/2019	Thunderstorm Wind	50	\$ 10,000.00
Tyrone	7/30/2019	Thunderstorm Wind	50	\$ 5,000.00
Cayuta	8/18/2019	Thunderstorm Wind	50	\$ 10,000.00
Cayuta	8/18/2019	Thunderstorm Wind	50	\$ 5,000.00
Alpine	8/27/2020	Thunderstorm Wind	50	\$ 5,000.00
Cayuta	8/27/2020	Thunderstorm Wind	50	\$ 10,000.00
TOTAL				\$561,000.00

| RISK ASSESSMENT |

The most commonly reported severe storms are those with damaging winds. Most of the damage reported is associated with downed trees and downed power lines. The information provided indicates winds in many events ranging from 50-60 knots. Where property damage estimates are indicated, reported damage was generally less than \$15-20,000. However, the larger regional storms bring damage estimates over \$1 million for the region. Descriptions for some severe previous events follow.

- May 7, 2000 – Thunderstorm winds knocked a tree down on a house in Tyrone. Winds snapped a power pole and brought wires down in Watkins Glen. Estimated wind speed: 52 knots.
- May 18, 2000 – Trees, wires, and utility poles were down due to thunderstorm winds. Some structural damage was reported from trees falling on houses. One trailer was flipped over at Reading Center and one wall of a barn was blown out. Trees 4 to 5 feet in diameter were uprooted at Clute Park. One car was crushed by a large tree. Estimated wind speed: 55 knots.
- August 28, 2001 – A freestanding one-car garage in Hector was lifted and moved approximately 4 feet from its original location. The damage to the garage indicated estimated wind speeds of 60 to 70 mph.
- July 21, 2003 – Strong thunderstorm winds were estimated to be close to 70 mph as they knocked down several large trees in Beaver Dams, Montour Falls, and Odessa. One large limb fell on a car. 19,000 electric customers in the area were without power. The Village of Montour Falls declared a state of emergency.

PROBABILITY OF FUTURE EVENTS & CLIMATE CHANGE

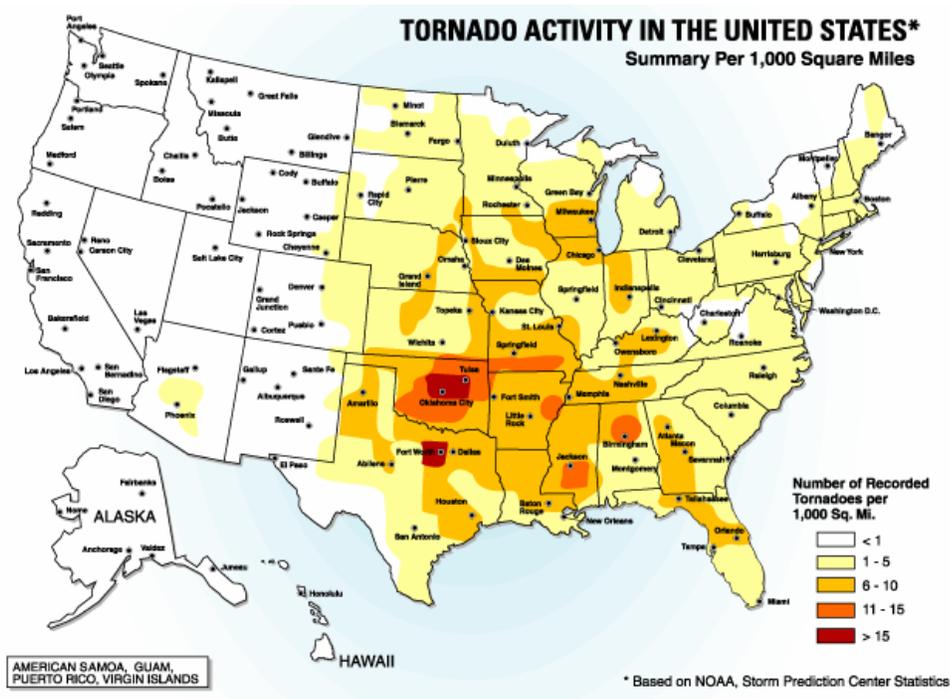
Based on historic severe storm occurrences, the probability of future events in Schuyler County is highly likely. Most thunderstorms occur during the late afternoon and evening hours of spring and summer, coinciding with the outdoor activities season. While only one reported tornado has occurred in the past 15 years in Schuyler County, volatile and changing weather patterns can bring tornadoes into the northeast with devastating results. Figure 22 shows a summary of severe tornado activity across the United States. The impacts of climate change on severe wind storms or tornadoes are currently relatively unknown due to the highly localized spatial scales of these types of events.

POTENTIAL IMPACT – LOCATION AND SEVERITY

The entire county is vulnerable to damage from severe winds and tornadoes. Severe weather conditions are often highly localized but can also occur as part of a larger system of severe storms or high winds. As a result, hazardous conditions can develop very quickly, with little or no warning time. Based on this analysis, Schuyler County has a major potential for severe impact.

The most devastating damages from severe storms [in addition to the potential to trigger tornadoes and floods] are likely to result from high winds. Straight-line thunderstorm winds occasionally exceed 100 mph. Major high-wind events can extend horizontally for hundreds of miles. The event duration ranges from about 4 hours up to 2 to 3 days, usually with nocturnal lulls. The dangers of high winds include roof failure, breaking glass, and flying debris [airborne missiles]. Strong winds can knock down trees, utility poles, and power lines. They can damage or destroy buildings, vehicles, and crops. Blowing dust can impair visibility. Debris frequently blocks transportation routes. In addition, strong winds in conjunction with a winter storm can create wind-driven snow, severe drifting, and dangerous wind chill.

FIGURE 22: Tornado Activity in the United States [NOAA]



| RISK ASSESSMENT |

The New York State Building Code requires construction for a design to withstand wind speeds of 90 mph. Since 2003, the building code has also included higher wind standards for structures that represent a higher hazard to human life in the event of failure. As shown in Figure 23, the wind zone map provides a general indication of wind hazards by showing suggested design speed zones according to the maximum wind expected. Schuyler County [and the rest of western NY] is located in Wind Zone 3, for which the recommended design wind speed [3-second gust] is 200 mph. It is thus anticipated that Schuyler County can experience severe storms in which strong winds exceed the design speeds of building codes. The most severe damage from wind would be expected in mobile homes, farm buildings, and other structures that may not have been constructed to withstand high wind speeds.

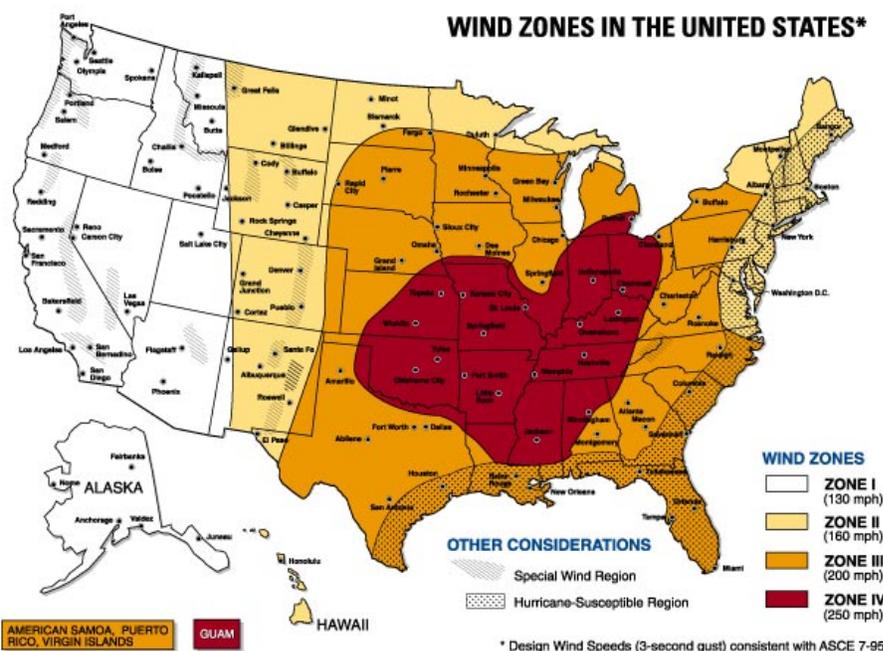
More common than direct damage to structures from high winds are the indirect damages or cascading impacts that result from blown-down trees and branches. For example, downed trees and limbs block roadways and cause damage to homes, vehicles, and the utility infrastructure. In addition, highway crews and first responders are put in harm's way many times when they respond to one tree down, and another tree comes down with the electric lines tangled in it.

Prolonged power outages occur when large storm systems produce widespread damage to the electrical system. This can lead to additional economic damage due to the inability to conduct business, loss of refrigeration, lack of heat/air conditioning, etc. In addition, some essential services, such as public water delivery, may be impacted by prolonged power outages. Emergency services may also be hampered, though efforts are underway to procure backup power for critical facilities.

An example of severe storm impacts is the traffic light at Alpine Junction [intersection of State Routes 13 and 224, T. Cayuta], which frequently loses power during storm events. This signal is at a remote location, and its loss during storms is a drain on the resources of the local fire department and the NY State Police, who dispatch staff to perform traffic control.

Schuyler County's agricultural industry is particularly susceptible to severe storm damage. In addition to the potential for building damage and indirect damage due to prolonged power outages, crops are susceptible to damage by high winds and hail. In addition, Schuyler County's wine industry relies on local grape production, which could be impacted by widespread vineyard damage.

FIGURE 23: Wind Zones in the United States [National Weather Service]



| RISK ASSESSMENT |

SEVERE ICE STORM/WINTER STORM [RELATIVE RISK SCORE: 12]

We have combined these two hazards within the Hazard Mitigation Plan as they are often similar in their seasonable occurrences and impact. Information and statistics, where appropriate, have been separately identified.

Winter storms are a common occurrence locally and throughout the region. Severe winter storms – characterized by heavier than normal snow, sleet, or freezing rain, extensive icing and snow drifts, strong winds and extreme cold – occur less frequently, and can cause considerably more damage.

When freezing rain accumulates as a glaze of ice on roads, trees, and other surfaces, significant damage and series disruptions can occur. Winter weather often results in temporary road closures, school and business delays, and brief utility outages. Given the frequency of winter storms, county and town governments and residents are often well prepared and equipped to deal with normal winter weather conditions. Severe storms, however, can affect the entire region and result in extensive damages.

Nor'easters

Is an intense storm that can cause heavy rain and snow, strong winds, and coastal flooding. Nor'easters have cold, low barometric cores. Nor'easter storms usually form off the East Coast near the Carolinas then follow a track northward along the coast until they blow out to sea, hence the term "Northeaster." Consequently, extreme cold and heavy snowfall can immobilize the entire state causing road closures, power outages, disruption in communication services, and no heat for several days.

Occasionally these storms are large enough to cover almost the entire State. One such storm was the Blizzard of 1993. Most often, however, Nor'easters affect primarily eastern and southern New York. Nor'easters are most notable for snow accumulations in excess of nine [9] inches, accompanied by high, sometimes gale force, winds.

PAST OCCURRENCES

Table 18, compiled from the NOAA Storm Events Database, shows dates of winter storm events, as well as their property damage estimates, if applicable. Narratives of select events follow.

TABLE 18: Winter Storm Events - Schuyler County 2005-2020 [NOAA, 2020]		
DATE	EVENT	PROPERTY DAMAGE
1/15/2007	Ice Storm	\$ -
2/13/2007	Winter Storm	\$ -
4/15/2007	Winter Storm	\$ -
2/26/2008	Winter Storm	\$ -
3/4/2008	Ice Storm	\$ -
3/7/2008	Ice Storm	\$ 5,000.00
12/11/2008	Winter Storm	\$ -
12/19/2008	Winter Storm	\$ -
2/25/2010	Winter Storm	\$ -
2/25/2011	Winter Storm	\$ -
3/6/2011	Heavy Snow	\$ -
12/26/2012	Winter Storm	\$ -
1/1/2014	Winter Storm	\$ -

| RISK ASSESSMENT |

TABLE 18: Winter Storm Events - Schuyler County 2005-2020 [NOAA, 2020]

DATE	EVENT	PROPERTY DAMAGE
2/5/2014	Winter Storm	\$ -
3/12/2014	Winter Storm	\$ -
2/1/2015	Heavy Snow	\$ -
03/14/2017	Heavy Snow	\$ -
03/01/2018	Heavy Snow	\$ -
11/15/2018	Heavy Snow	\$ -
01/19/2019	Heavy Snow	\$ -
12/01/2019	Heavy Snow	\$ -
02/06/2020	Heavy Snow	\$ -
12/16/2020	Heavy Snow	\$ -
02/01/2021	Winter Storm	\$ -
TOTAL		\$5,000

- 02/06/2020 - A storm system developed during the late afternoon and evening of the 6th. This storm rapidly intensified throughout the morning hours of the 7th, leading to a quick period of heavy snowfall across Schuyler County during the morning and early afternoon hours. Snow accumulated 7-9 inches.
- 12/16/2021 - A Nor'easter moved slowly up the US eastern coastline on the afternoon of the 16th through the 17th. The storm system produced very heavy snowfall across parts of Schuyler County. Extreme snowfall rates of 5-6 inches per hour were reported at times in the heaviest parts of the band. Transportation impacts were extensive with numerous road closures and delays. Snow accumulated 8-12 inches.
- 02/01/2021 - A complex long duration winter storm system affected the County from late in the day of January 31st through around midday February 3rd. Snow accumulated 13-24 inches.

PROBABILITY OF FUTURE EVENTS AND CLIMATE CHANGE

The National Weather Service reports that southern New York has one of the highest incidences of ice storms in the U.S., with freezing rain and icing occurring somewhere in this region about 10 days per year. Based on historic winter storm occurrences [as documented by the National Climatic Data Center], the probability of future events occurring in Schuyler County is highly likely. Schuyler County and the surrounding region have already begun to experience the effects of climate change on their severe winter storms. The winter months are noticeably warmer, with decreasing snow events. However, we could see an increased frequency and intensity of Nor'easters as a result of less frigid temperatures and an increase in moisture in the air. Table 19 illustrates the mean annual temperature change projected between 2020-2100.

TABLE 19: Mean Annual Temperature Change - Region 3 - Southern Tier [Data: NYSERDA]

BASELINE [1971-2000] 34.0 INCHES	LOW ESTIMATE [10TH PERCENTILE]	MIDDLE RANGE [25TH TO 75TH PERCENTILE]	HIGH ESTIMATE [90TH PERCENTILE]
2020s	+ 1.8 °F	+ 2.3 °F to + 3.3 °F	+ 3.8 °F
2050s	+ 3.6 °F	+ 4.4 °F to + 6.3 °F	+ 7.1 °F
2080s	+ 4.2 °F	+ 5.7 °F to + 9.9 °F	+ 11.6 °F
2100s	+ 4.5 °F	+ 6.3 °F to + 11.7 °F	+ 13.8 °F

| RISK ASSESSMENT |

POTENTIAL IMPACT – LOCATION AND SEVERITY

The entire county is vulnerable to damage from ice storms. The National Weather Service is typically able to provide 12 to 24 hours of advanced warning for these events, which typically last for one to two days. Based on this analysis, Schuyler County has a substantial potential for severe impact.

The most common impact of ice storms results from hazardous travel conditions. In addition, the weight of the ice can knock down trees and power lines, disrupting power and communication for days. Falling trees and limbs can damage houses and cars. Normal emergency operations, such as police, fire and ambulance service may also be impeded. Since the same conditions generally occur over a large area, aid from neighboring jurisdictions may not be available.

The potential impact of a worst-case ice storm in Schuyler County is evaluated based on the January 1998 ice storm in the North Country region of New York. This ice storm was one of the most severe in the state's history. It impacted over 17 million acres, with 5 million acres experiencing severe damage. Ice accumulations were generally between one and three inches, exceeding 4 inches in some areas. Trees and power lines snapped due to the weight of the ice. Five people were killed by carbon monoxide poisoning associated with improper use of generators. One death occurred when an individual slipped on accumulated ice and received head injuries. During the peak of the storm, more than 320,000 people were without electricity. Power was not completely restored for 23 days. Damage to the utility companies ran in the millions. Many dairy farmers lost their cows; others were unable to milk without electricity. The region's hardwood resources [including sugar maples] were severely damaged. Many roads and bridges were closed due to ice, fallen trees, and fallen power lines. There were numerous traffic accidents. Several radio stations were knocked off the air. Additional economic impacts resulted from closed stores, closed banks, ATMs not working due to lack of power, lack of transportation routes, etc. The damages eligible for disaster assistance totaled \$68.1 million [does not cover all damages]. [Source: NOAA National Climatic Data Center, Storm Event Database]

| RISK ASSESSMENT |

LANDSLIDE [RELATIVE RISK SCORE: 9]

Landslides are composed of natural rock, soil, artificial fill, or a combination and move along a downward slope. They flow rapidly, striking at avalanche speeds that can travel several miles, growing in size as they pick up trees, boulders, cars and other materials. Landslides occur when the slope or soil stability changes from stable to unstable, which may be caused by earthquakes, storms, volcanic eruptions, erosion, fire, or additional human-induced activities. Typically, the steeper the slope, the higher the risk for landslide occurrence. Slopes greater than 10 degrees are more likely to slide, as are slopes where the height from the top of the slope to its toe is greater than 40 feet. Slopes are also more likely to fail if vegetative cover is low and/or soil water content is high. However, landslides can occur with very little slope, sometimes classified as earth slumping or earth flow.

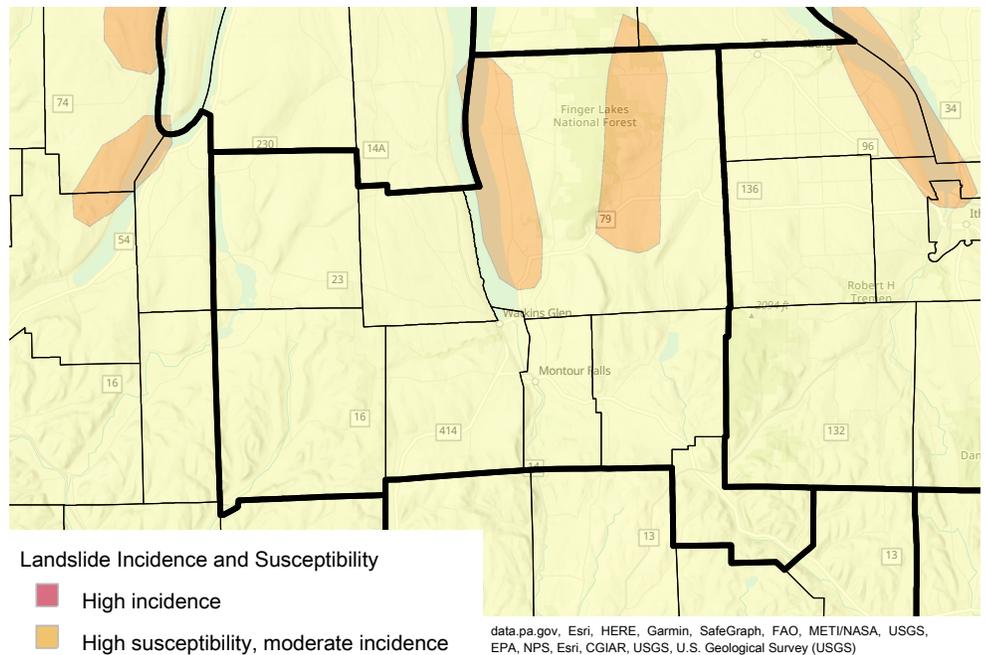
PAST OCCURRENCES

No significant landslide events have previously occurred in Schuyler County.

PROBABILITY OF FUTURE EVENTS AND CLIMATE CHANGE

Schuyler County's topography makes it fairly susceptible to landslides, although it is a rare event. Based on historic landslide occurrences, the probability of future events in Schuyler County is unlikely. Figure 24 shows the areas with the highest susceptibility to a landslide within Schuyler County. Landslide materials can consist of natural rock, soil, artificial fill, or a combination of these materials. They can be caused by a variety of factors, although those most prevalent in Schuyler County are storms and human land modifications. According to the US Forest Service, changing forest and vegetative cover as a result of climate change will impact parts of New York State. Model projections suggest that many northern and boreal species, including balsam fir, red spruce, and black spruce, may fare worse under future conditions, but other species may benefit from projected changes in climate. The 2019 NYS Hazard Mitigation Plan indicates that the rise in unpredictable weather patterns could increase the occurrence of landslides throughout the New York state. The increase in frequency of extreme rainfall events can be directly correlated to an increase of landslides. Increased hazards events such as hurricanes, tornadoes, and extreme heat and cold can also initiate landslides.

FIGURE 24: Landslide Susceptibility NYS [Data: USGS]



POTENTIAL IMPACT – LOCATION AND SEVERITY

Dependent on where they occur, landslides can pose significant risks to health, safety, transportation, and other services. The magnitude of the landslide, measured in geographic area [acres] as well as tonnage of material displaced, coupled with location would determine the severity of the incident. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

HURRICANES/TROPICAL STORM [WIND AND SURGE] [RELATIVE RISK SCORE: 8]

As identified in the New York State Hazard Mitigation Plan, coastal storms, including, tropical storms, and hurricanes can, either directly or indirectly, impact all of New York State. While Schuyler County is significantly inland and less densely populated, winds and rain brought by these storms can still be devastating. Much of the impacts from wind and rain events are found in the Flooding, Severe Wind/Tornado, and Severe Winter Storms/Ice Storms sections of this Risk and Disaster Resilience Assessment. For context of the special circumstances of a hurricane or tropical storm event, however, specific information on this hazard is still provided here.

TROPICAL CYCLONES

A tropical cyclone, developed in the tropics, is an organized rotating weather system. They begin as a tropical depression with sustained winds below 38 mph, they can potentially develop into a tropical storm [with sustained winds of 39 to 73 mph] or a hurricane [with winds of 74 mph and higher].

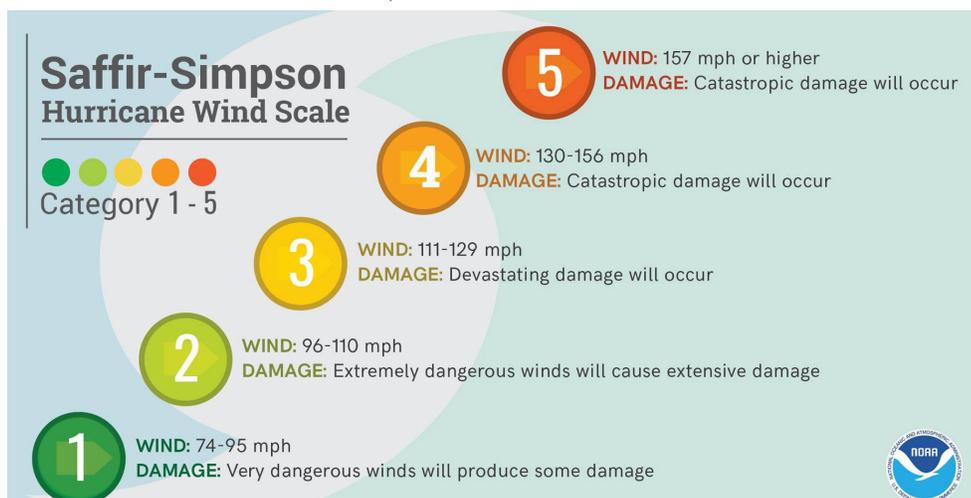
Tropical cyclones contain a warm core of low barometric pressure and can produce heavy rainfall, powerful winds, and storm surge. While generally these cyclones are less dangerous than hurricanes, tropical depressions, and tropical storms they can still be deadly. Heavy rains, coastal flooding, and severe weather, such as tornadoes, pose the most significant threat.

HURRICANES

A hurricane is occurs when a tropical cyclones, formed in the atmosphere over warm ocean areas, in which wind speeds reach 74 mph or more and blow in a large spiral around a relatively calm center or 'eye'. Circulation is counterclockwise in the northern hemisphere. One of the most destructive types of storms is a hurricane which can last for extended time periods, vary in size, and carry wind speeds that can rip through trees, demolish homes and make loose objects deadly. Storm surges are the most serious hurricane-related hazard. Storm surges combined with normal high tides can create hurricane storm tides, in excess of 25 feet above the average water level. In addition, wind driven waves are superimposed on the storm tide. The rise in water level can cause severe inundation in coastal areas, particularly when storm tides coincide with normal high tides. The typical hurricane season begins in the summer during the month of June and last until November. Hurricanes form in the warm tropical waters of the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico, and make their presences at any point of an active hurricane season.

Hurricane classifications are determined by the Saffir-Simpson Scale. The National Hurricane Center [NHC] defines the Saffir-Simpson Hurricane Scale as a 1-5 rating based on a hurricane's present intensity [see Figure 25]. This is used to give an estimate of the potential property damage and flooding expected along the coast upon a hurricane's landfall. Wind speed is the determining factor in this scale, as storm surge values are highly dependent on the slope of the continental shelf and the shape of the coastline, in the landfall region.

FIGURE 25: Saffir-Simpson Hurricane Wind Scale[Source: NOAA]



PAST OCCURRENCES

While Schuyler County was included in the presidential disaster declaration for Hurricane Sandy in 2012, we were not directly impacted by the storm. Between 1996-2017 Schuyler County has reported \$0 in damage loss as a result of a Hurricane.

| RISK ASSESSMENT |

PROBABILITY OF FUTURE EVENTS AND CLIMATE CHANGE

Based on historic hurricane/ tropical storm occurrences, the probability of future events in Schuyler County is unlikely. Sea-level rise will make every tropical cyclone that hits New York more likely to release damaging floods. For instance, storm floods of nearly seven-and-a-half feet once occurred only a couple times per millennium. In today's somewhat warmed climate, 7.5-foot floods are projected to happen every 25 years. By 2030, these floods will occur every five years.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Wind and rain brought by tropical cyclones and wind, rain and/or snow brought by nor'easters are of greatest concern within this hazard. Impacts could occur in all locations throughout the county. The sections on Flooding, Severe Wind/Tornado, and Severe Winter Snowstorms/Ice Storms discuss in detail the potential severities of these impacts. Based on this analysis, Schuyler County has a limited potential for severe impact.

EXTREME TEMPERATURES [RELATIVE RISK SCORE: 8]

Temperature extremes, while not as notable as other hazards, can have devastating consequences to people, animals, crops, and our infrastructure. Evidence indicates that climate change is increasing the relative frequency of temperature swings and the duration of extreme temperature events.

The New York State Hazard Mitigation Plan [2019] provides the following definitions:

- Extreme Heat – Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks.
- Extreme Cold – Although no specific definition exists, the following are characteristics of an extreme cold event in New York State: Temperatures at or below zero degrees for an extended period of time. Extreme cold events are usually part of winter storm events but can occur during any time.

The State of New York's geographical positioning and typical air masses combined with the atmospheric circulation provides general climatic controls for the region making the entire State susceptible to extreme temperatures. Varying land elevations, character of the landscape, and close proximity to large bodies of water play a significant role in the State's temperatures. Dry air frequently arrives in the State from the northern interior of the continent bringing in masses of cold. From the south and southwestern regions of the continent winds transport warm, humid air that travel from the Gulf of Mexico and bordering subtropical waters. The third great air mass flows from the North Atlantic Ocean inland creating cool, cloudy, and damp weather conditions.

Extensive periods of either extreme cold or warm temperatures are a result from movement of great high pressure systems into and through the eastern United States. Under higher than normal atmospheric pressures when Arctic air masses are present, extreme winter temperatures hover over New York, flowing southward from central Canada or the Hudson Bay. High-pressure systems often move just off the Atlantic coast, become more or less stagnant for several days, and then a persistent airflow from the southwest or south affects the State. This circulation brings the very warm, often humid weather of the summer season and the mild, more pleasant temperatures during the fall, winter, and spring seasons.

PAST OCCURRENCES

There have been four occurrences of extreme temperature events impacting Schuyler County since 1960, the most recent being in August of 2001, these incidents impacted the entire county, not one specific area of the county. No fatalities or severe injuries are attributed to any of these events and property damage estimates are minimal.

| RISK ASSESSMENT |

PROBABILITY OF FUTURE EVENTS AND CLIMATE CHANGE

Based on historic extreme temperature occurrences, the probability of future events in Schuyler County is occasional. Utilizing data from historical events between 1960-2012 and average probability models, an average annualized future probability assessment was completed for the sixty-two counties found within the State of New York. The total future probability percentage for each county was added together and then divided by 62 for both extreme heat and extreme cold hazards. The data revealed that there is an overall 6% average future probability that an extreme heat occurrence will impact New York State in any given year. In comparison, extreme cold events have a 7% average future probability in a given year to occur.

As a result of climate change, the frequency of extreme temperature events is expected to increase, and such events are associated with increased morbidity and mortality as illustrated in Table 20. Adaptation to climate change, particularly in relation to extreme heat or cold events, requires localized mitigation efforts.

	BASELINE	2020s	2050s	2080s
Days over 90 °F	8	14 to 17	23 to 34	27 to 57
# of Heat Waves	0.7	2 to 2	3 to 4	3 to 8
Duration of Heat Waves	4	4 to 4	4 to 5	5 to 6
Days below 32 °F	133	103 to 111	84 to 96	68 to 88

NOTE: Projections represent the Middle Range [25th to 75th Percentile]

POTENTIAL IMPACT – LOCATION AND SEVERITY

Extreme temperatures can cause serious injury or death but not in large numbers. Extreme temperature occurrences can take place as often as once a year or once every seven years. None of the recent events have caused any apprehensions regarding an increase in frequency or severity of such events impacting New York State’s capabilities to handle such measures. During periods of extreme temperatures, inadequate protection from harsh elements is especially dangerous. Consequently, during extreme temperature conditions, the greatest concern is for specific populations including 1) the elderly, who are less able to withstand temperature extremes due to their age, health conditions and limited mobility to access shelters; 2) infants and children up to four years of age; 3) individuals who are physically ill (eg. heart disease or high blood pressure); 4) low-income persons that cannot afford proper heating and cooling; and 5) the general public who may overexert during work or exercise during extreme heat events or experience hypothermia during extreme cold event. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

EARTHQUAKE [RELATIVE RISK SCORE: 6]

An earthquake follows sudden movements in the Earth that are caused by abrupt releases of seismic energy accumulated over long periods of time. Forces from plate tectonics help shape the Earth's surface, and when unexpected slips along fault lines occur, changes in the Earth create jolts below the surface causing ground shaking activity. The massive plates slowly move over, under, and past each other at gradual rates. However, sometimes the plates lock together and are unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free, thus, producing an earthquake.

The seismic waves caused by earthquakes can potentially destroy buildings, infrastructure, and cause loss of life. Aftershocks, which follow mainshocks, are normally smaller and can continue for a period of weeks, months, or years after the initial shock hits. In addition to creating ground acceleration, earthquakes can trigger surface faulting, volcanic activity, tsunamis, landslides, and liquefaction depending on the conditions.

Earthquake intensity and classification are commonly measured using two different scales, the Maximum Modified Mercalli Intensity Scale [MMI] and the Richter Magnitude Scale [often shortened to Richter Scale]. The MMI Scale estimates the shaking strength of an earthquake at a specific location, such as the epicenter, or over a specific area by considering its effects on people, objects, and buildings. The strength reduces as the distance from the epicenter increases. The Richter scale uses whole numbers and decimal fractions to quantify the energy released during an earthquake. This determination is based on logarithms from the amplitude of waves recorded by seismographs.

Peak Ground Acceleration [PGA] and Spectral Acceleration [SA] are commonly used in terms of expressing earthquake hazards. As defined by USGS, "PGA [peak acceleration] is what is experienced by a particle on the ground. SA [spectral acceleration] is approximately what is experienced by a building, as modeled by a particle on a massless vertical rod having the same natural period of vibration as the building"⁸. They are measured by the acceleration in gravity [g] or the percent acceleration force of gravity [%g]. Mapping both PGA and SA hazards, allows susceptible location to be identified.

PAST OCCURRENCES

No earthquakes of any significance [M 3.5 or higher] have originated in or near Schuyler County.

| RISK ASSESSMENT |

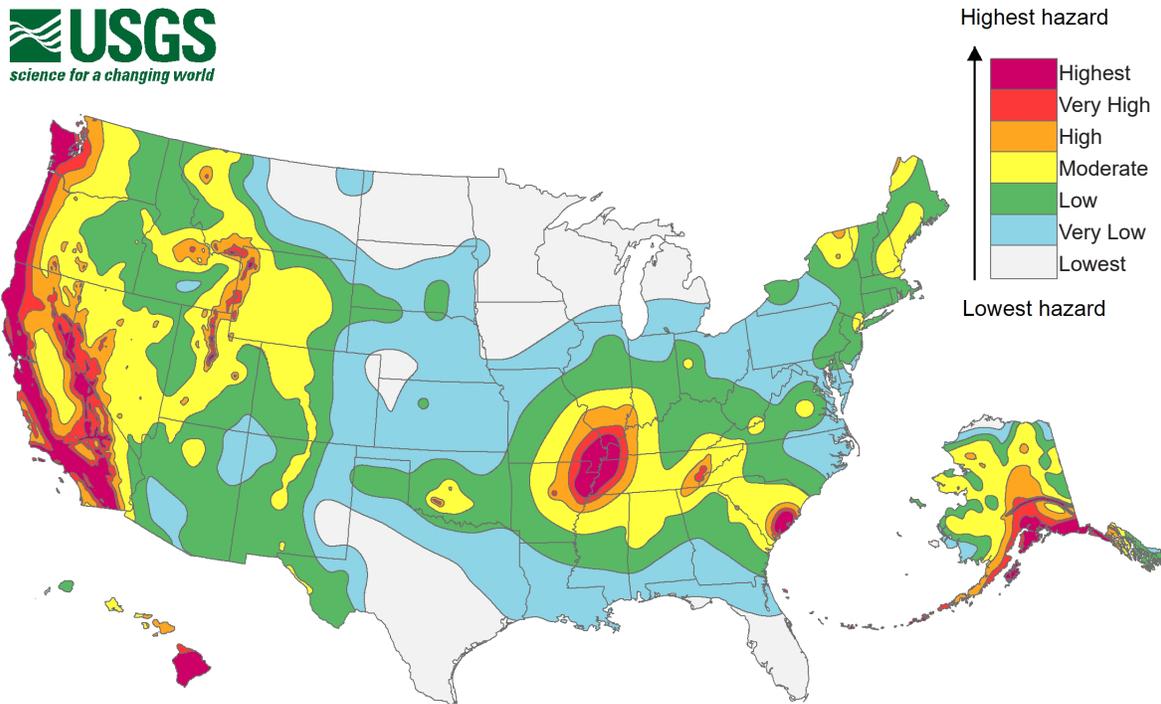
PROBABILITY OF FUTURE EVENTS AND CLIMATE CHANGE

Since 1925, the planning area experienced 6 tremors as a result of earthquakes with epicenters in Canada or northern New York State. None of the reported events were in the planning area and no reports of damages or injuries were recorded. No damages or injuries are anticipated in the future and this hazard was not considered further in the plan. Based on historic earthquake occurrences, the probability of future events in Schuyler County is unlikely.

According to the New York State Hazard Mitigation Plan, jurisdictions with a PGA of 3% or higher are required by FEMA to fully profile the earthquake hazard to receive approval of its local hazard mitigation plan. Figure 26 indicates that Schuyler County's seismic hazard as defined by PGA in a 10% probability of exceed in 50 years to be between 2% and 3%, therefore we are not required to fully profile the earthquake hazard for Schuyler County. Climate change is not likely to have a significant impact on the probability of future earthquakes impacting Schuyler County or the Southern Tier. However, should the state's regulations regarding fracking change there could be an increased risk of induced earthquake activity due the proximity of fracking operations in the surrounding area.

FIGURE 26: 2018 Long-term National Seismic Hazard Map [USGS]

Earthquake hazard map showing peak ground accelerations having a 2 percent probability of being exceeded in 50 year



POTENTIAL IMPACT – LOCATION AND SEVERITY

Earthquakes are regional events, therefore, should one impact within or near Schuyler County, the whole county would be susceptible to damages, with the greatest potential for damages being the built environment. Total annualized losses for Schuyler County are the lowest in the state. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

DROUGHT [RELATIVE RISK SCORE: 6]

Drought is a normal, recurrent feature of climate, although at times considered a random event. It occurs in virtually all climatic zones, but its characteristics vary significantly from one region to another. Drought originates from a deficiency of precipitation over an extended period of time, usually a season or more. Drought affects people, animals, and vegetation. It can seriously damage crops, livestock, municipal water supplies, and recreational facilities. Drought has an economic impact if conditions exist over a period of years. Elevated temperatures, high winds, and low humidity associated with drought can make areas more susceptible to wildfire.

PAST OCCURRENCES

Drought in the Finger Lakes region is a rare occurrence and usually only occurs as part of a larger regional event. Data obtained from the NOAA NCEI Storm Events Dataset and listed in Table 21 indicates the following past occurrences of drought impacting Schuyler County:

DATE	AREA IMPACTED	NARRATIVE	\$ OF DAMAGES THROUGHOUT IMPACT AREA
July 2016	Regionally Central NY and Finger Lakes Area	Significant dryness due to lack of rainfall saw short term drought, areas experienced as little as 25 percent of normal rainfall through the end of July.	Unknown
August - October 2016	Regionally Central NY and Finger Lakes Area	Drought persisted portions of the area deteriorated from severe to extreme drought. Agricultural interests reported significant stress to non-irrigated crops, with many areas reporting expected losses to corn, soybean and hay yields. Several communities began to place voluntary and mandatory water restrictions on their residents.	Unknown

PROBABILITY OF FUTURE EVENTS & CLIMATE CHANGE

Based on historic landslide occurrences, the probability of future events in Schuyler County is unlikely. According to the New York State Hazard Mitigation Plan, Schuyler County is assigned a under 5% future probability of experiencing drought each year, which relative to the rest of New York State is a moderate likelihood. Climate change increases the potential for a drought and can potentially make droughts more severe and long-lasting. While it is unclear how climate change will impact regional water supply, any added stress from climate change increases the competition for water resources.

According to the 2019 New York State Hazard Mitigation Plan, there is an expectation droughts – specifically seasonal summer ones - could become more common as a result of climate change and by the end of the century, it is more likely than not that late-summer short-duration droughts will increase. It is less clear what impacts climate change will have on longer term “multi-year” droughts, but it is clear that climate change is likely to make at least some droughts more common.

Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: <ul style="list-style-type: none"> • short-term dryness slowing planting, growth of crops or pastures Coming out of drought: <ul style="list-style-type: none"> • some lingering water deficits • pastures or crops not fully recovered
D1	Moderate Drought	<ul style="list-style-type: none"> • Some damage to crops, pastures • Streams, reservoirs, or wells low, some water shortages developing or imminent • Voluntary water-use restrictions requested
D2	Severe Drought	<ul style="list-style-type: none"> • Crop or pasture losses likely • Water shortages common • Water restrictions imposed
D3	Extreme Drought	<ul style="list-style-type: none"> • Major crop/pasture losses • Widespread water shortages or restrictions
D4	Exceptional Drought	<ul style="list-style-type: none"> • Exceptional and widespread crop/pasture losses • Shortages of water in reservoirs, streams, and wells creating water emergencies

POTENTIAL IMPACT – LOCATION AND SEVERITY

While the probability of Schuyler County experiencing long-term droughts is low, it has occurred in the past. With the greatest threat of drought being to agriculture, Schuyler County could suffer losses county-wide. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

WILDFIRE [RELATIVE RISK SCORE: 6]

A wildfire is defined as an uncontrolled fire spreading through natural or unnatural vegetation that often has the potential to threaten lives and property if not contained. Wildfires include common terms such as forest fires, brush fires, grass fires, range fire, ground fires, or wildland/urban interface fires. Wildland/urban interface fires burn or threaten to burn buildings and other structures. Naturally or purposely ignited fires that are controlled for a defined purpose of managing vegetation for one or more benefits are not considered wildfires.

Schuyler County has the vegetation and terrain that would promote wildfire, but the humidity level is generally high enough to reduce the risk. Overall, much of the Finger Lakes region is not prone to significant wildfire.

PAST OCCURRENCES

There have been no significant historical occurrences of wildfire in Schuyler County.

PROBABILITY OF FUTURE EVENTS & CLIMATE CHANGE

According to wildfire experts claim wildfire risks are increasing due to:

- Leaves, branches, and plant growth on forest floors which provide fuel for a wildfire
- Increasingly hot, dry weather in the U.S.
- Changing weather patterns across the country [i.e. climate change]
- More homes built within the wildland/urban interface area

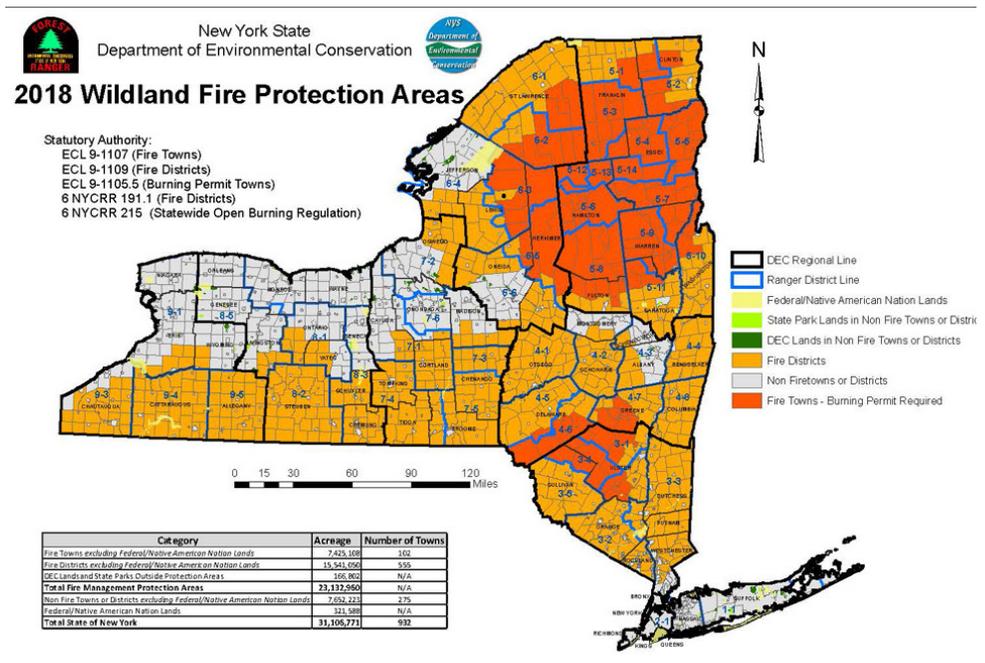
Mitigation and awareness efforts, spearheaded by local fire departments and the New York State DEC Forest Rangers help to reduce the risk. State and federal parks, which comprise a great deal of property within Schuyler County, have strict rules about camp fires, barbecue pits, and the like. The Schuyler County Fire Coordinator, in conjunction with local fire departments and law enforcement, ensure that the public is aware of DEC-mandated bans on open burning during the hottest and driest months of the year. Based on historic wildfire occurrences, the probability of future events in Schuyler County is occasional.

Climate change make forests more susceptible to severe fires due to changing precipitation patterns. Wildfires emit carbon dioxide as well as greenhouse gases and air pollutants such as methane, and nitrous oxide; up to 3% of annual U.S. greenhouse gas emissions. Wildfires release carbon that has been sequestered by the trees that are burned.

POTENTIAL IMPACT – LOCATION AND SEVERITY

The severity of a wildfire in Schuyler County is rated as low based upon past occurrences. Figure 27 indicates that as of 2018, Schuyler County is located in Fire District 8-3. Local fire departments, aided by DEC Forest Rangers, are able to contain wildfires quickly and minimize impacts and losses. Events that occur are isolated and small. The most significant hazard exists at the wildland/urban interface. New York State Department of Environmental Conservation Wildfire Predictive Services has created the New York State Fire Danger Rating Area [FDRA] which updated daily. Based on this analysis, Schuyler County has a limited potential for severe impact.

FIGURE 27: Wildland Fire Protection Areas [NYSDEC]



| RISK ASSESSMENT |

MAJOR FIRES [NON-WILDFIRE] [RELATIVE RISK SCORE: 6]

While structure fires do occur several times a year in Schuyler County, a major fire, defined as multiple related structure fires in one area or a fire of a large building, would be a significant incident, likely requiring assistance from outside the County. The greatest risk for a major fire lies in village areas due to their higher concentration of structures, and industrial buildings and complexes.

PAST OCCURRENCES

Major fires in Schuyler County have been limited. In recent history, the following incidents have occurred:

- March 2007 – Fire at Watkins Glen International race track destroyed the Glen Club. Most County fire departments aided in the response.
- October 2009 – Block fire in Watkins Glen on Franklin Street required a response from a total of 19 fire departments – nine from Schuyler County and five each from Chemung and Yates Counties.
- March 2013 – The shared County Highway Department and Village of Watkins Glen Public Works building burned. 12 fire departments from the region responded.



PROBABILITY OF FUTURE EVENTS

The probability of a major fire event in Schuyler County is occasional.

POTENTIAL IMPACT – LOCATION AND SEVERITY

The greatest potential for a future major fire event would be in village areas and industrial buildings and complexes. Severity would largely be isolated to the immediate vicinity of the fire itself. Serious injury or death is unlikely, but major damage to property could occur. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

MAN-MADE RISKS

CYBER ATTACK [RELATIVE RISK SCORE: 16]

Cyber attacks are now well established as a serious and unconventional hazard. They pose significant threat not only to our computer and information networks, but also to the those systems which are supported by our networks. Systems such as government, business, and industrial data systems; communications infrastructure; emergency services; healthcare; water and waste water; and financial services can all be impacted.

Recently there have been several cyber attacks on corporations and the United States government which have been well publicized. These are not the only entities vulnerable to cyber attacks, however. Every day small business, state and local government, and individuals fall victim to some sort of cyber attack. Most of these attacks are stopped by firewall and other security implementations, but many succeed. While some attacks are detected, many go unnoticed. Cyber attacks are intentional acts, and as such, require a dynamic set of mitigation and protection efforts to protect against them.

The perpetrators of cyber attacks can be anyone with technical knowledge. Some attacks are aimed specifically at certain organizations or people, but most are the result of broad nets cast out to determine what systems are most vulnerable.

Our dependence on technological infrastructure for everything from data storage to operations make the potential impacts of a cyber attack severe. Cyber attacks, for the purpose of this plan, can include physical theft of technology or data storage devices; unauthorized access to computers, networks, or data; or hacking of computers or networks. Although Schuyler County is a small rural county, it is not any less immune to the threat of cyber attack. The same holds for the towns and villages within Schuyler County, as well as businesses, organizations, and residents.

PAST OCCURRENCES

According to Schuyler County information technology specialists, cyberattacks on Schuyler County government systems happen frequently. Most of these are low-threat automated attacks which most modern systems experience in the modern age. These are defended against by firewalls, anti-virus software, and cybersecurity practices. These systems and practices, however, must be kept up to date and reflect industry best practices to ensure that information is kept secure. On August 30, 2017 Schuyler County offices experienced a ransomware attack with a malicious program that compromised Schuyler County servers and then moved laterally through the network to compromise additional machines encrypting data. Schuyler County opted NOT to pay the ransom. Schuyler County worked very closely with the New York State Cyber Command Center [CYCOM] and the Federal Bureau of Investigation [FBI] to isolate the threat and begin the recovery process, including forensic analysis and best practice recommendations. It took several weeks to restore technology infrastructure. Emergency Management and Sheriff's Office servers and applications were identified as the highest priorities, followed by Finance and Board of Election devices. In the subsequent weeks, services were restored to the remaining departments.

According to the National Association of Counties [NACo] "The most recent Norton Cybercrime report found that 1.5 million adults become victims of cybercrime every day – that's 18 per second and 556 million per year for a total financial loss of \$118 billion. Businesses last year reported a 42 percent increase in cyber-attacks. Government offices are also under attack, and it's widely perceived that cyber-threats against them have become more common, more sophisticated, and more dangerous."

PROBABILITY OF FUTURE EVENTS

Cybersecurity has been identified as a top 10 priority in the New York State Homeland Security Strategy [2022]. Instances of cyberattacks receiving media attention have risen exponentially, as has growth in the cybersecurity industry, indicating an ongoing and growing threat. The probability of cyberattacks impacting residents, businesses, and/or government in Schuyler County is high. After the ransomware attack, Schuyler County invested heavily in Technology and cybersecurity. We updated our IT Technology Policy, created a Disaster Recovery Plan, and implemented several security changes throughout our network by removing administrative privileges from staff and providing enhanced security processes utilizing Group Policy. We also implemented several security scans and applications that monitor system files for suspicious activity. We followed and implemented several recommendations provided by CYCOM and the BI. We also moved several applications to cloud-based solutions. Based on the constant evolution of cyberattacks, the probability of future events in Schuyler County is likely.

| RISK ASSESSMENT |

POTENTIAL IMPACT – LOCATION AND SEVERITY

NACo also identified that “Government agencies reported 268 data breaches between 2009 and 2012, which exposed more than 94 million records containing personally identifiable information– twice as many breaches, and triple the number of records disclosed as were identified in the previous year. The average cost for each record lost or breached is \$194, a figure that quickly becomes overwhelming considering each county’s massive numbers of records.” Impacts could range from data theft, including personal and financial information, destruction of critical systems, and even damage to critical infrastructure. These types of cascading impacts can range from nuisance to severe. Based on this analysis, Schuyler County has a major potential for severe impact.

HAZARDOUS MATERIALS RELEASE - IN TRANSIT [RELATIVE RISK SCORE: 12]

Hazardous materials are moved daily through Schuyler County by rail, road, or pipeline. While most hazardous materials are transported through the County to a destination elsewhere, many of the materials are consumed within Schuyler County for agriculture, business, industry, or household use. Common chemicals include those classified as fertilizers; natural gas, and propane; fuel oil, diesel, gasoline, or kerosine; racing fuels and associated liquids; and many others.

PAST OCCURRENCES

No significant releases from hazardous materials in transit have occurred within Schuyler County.

PROBABILITY OF FUTURE EVENTS

While the probability of future of hazardous materials release in transit is rated as likely, the potential impact is high. For example, a release could occur accidentally or as the result of a criminal act. Regardless of the cause, the response priority is always life safety. The Hazardous Materials Annex to the County Comprehensive Emergency Management Plan addresses most mitigation, preparedness, response, and recovery aspects of this hazard.

Since 1986 pipeline incidents causing death or major injuries have declined. The long-term trend is an average decline of 10 percent every three years. A number of factors, including corrosion, equipment failure, damage from excavations, incorrect operation, and natural forces, can cause pipeline incidents. Currently, available data covers the period from 1991 through 2011.

Historically, excavation damage is the leading cause of the most serious pipeline failures. Accident information is grouped into eight cause categories: excavation damage, corrosion, natural forces, other outside force damage, material or welds, equipment, incorrect operations, and others. Therefore, Schuyler County promotes the 811 Call Before You Dig program.

The main hazard from a pipeline is the loss of containment, leading to a product leak and the potential for fire, explosion, and asphyxiation. The variables that affect the impact of a breach include the size of the pipe, the size of the breach, line pressure, weather, ignition source, and location. In addition, the location along the pipeline significantly affects the impact of an incident, including accessibility, terrain, proximity to buildings, and the population within the area.

Railroads have a strong record for safely moving hazardous materials [hazmat], with 99.998 percent of all shipments reaching their destination without a release caused by accident. In addition, railroads have lowered hazmat accident rates by 91 percent since 1980 and 38 percent since 2000.



| RISK ASSESSMENT |

The movement of hazardous materials is highly regulated, involves specialized employee and local first responder training, and is done with the utmost care to reduce safety and security risks. In addition, the federal government has comprehensive regulations covering the safety and security of the movement of hazmat by rail – including the Federal Railroad Administration [FRA], Pipeline and Hazardous Materials Safety Administration [PHMSA], and Transportation Security Administration [TSA].

The federal government also directs railroads to route hazardous materials on lines posing the least overall safety and security risk. It identifies the risk factors railroads should take into account in determining the best routes.

Truck and rail tanks that carry chemicals such as LPG are specifically designed to survive accidents, although an accident can still cause a leak of product, vapor clouds, fire, and explosions.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Safe transportation of hazardous materials is primarily the responsibility of the carrier. What materials may be traveling through the County at any given moment is generally unknown. While rail and pipelines move the vast majority of hazardous materials through Schuylar County, a significant amount is also moved by truck, primarily on state routes. However, detours and local deliveries can cause hazardous materials to be transported on any road within the County. In an emergency, responders rely on the placards attached to rail cars and trucks and available shipping manifests to identify materials being transported. In addition, pipelines traverse Schuylar County carrying liquid propane gas [LPG] and natural gas. There are 20.9 miles of pipeline in Schuylar County carrying LPG and 45 miles of pipeline carrying natural gas [not including the gathering lines from storage fields or distribution lines providing home delivery].

Natural Gas pipelines are used to transport Natural Gas to storage in Schuylar County and to move products to destinations beyond the county line. Several gas wells in Schuylar County use small gathering lines to bring gas to compressor stations, which then route the gas into the larger pipeline infrastructure. Natural gas is delivered to Schuylar County for storage in the Town of Tyrone, where it is stored in depleted gas wells. Natural gas is also stored in salt caverns in the Town of Reading. Finally, natural gas is routed by pipeline from storage to distribution systems throughout the Northeast.

LPG is delivered to Schuylar County for storage at the Enterprise facility in the Town of Reading. LPG is shipped by pipeline and bulk cargo tank trailers from the storage facility to retail distributors.

The impact of a rail or truck hazardous materials incident depends on location, weather, and the population proximate to the crash site. Leaking products, vapor clouds, fire, and explosions are the immediate threats to life. Some chemicals may enter the ground or water, requiring various measures, including remediation, which can take years. Future preparedness efforts in Schuylar County will include examining bulk transportation of hazardous materials through higher population areas and near critical infrastructure and sensitive populations such as schools and healthcare facilities. Based on this analysis, Schuylar County has a major potential for severe impact.

| RISK ASSESSMENT |

ACTIVE SHOOTER [RELATIVE RISK SCORE: 12]

Active shooter events, although not new to our society, are on the rise. These tragic events often have few early actionable indicators which can be used to prevent these incidents and the associated loss of lives. Recent shootings do not indicate any consistency in motive, but can include religious radicalization, disgruntled employees, and psychological disorders. While some targets appear to be associated with the shooters' motives, others appear to be random and without reason.

Statistics and facts below and in Figure 28 are from the FBI's "A Study of Active Shooter Incidents in the United States Between 2000 and 2013" and "Topical One-Pagers 2000-2019"

Incidents

- An average of 11.4 incidents occurred annually.
- An average of 6.4 incidents occurred in the first 7 years studied, and an average of 16.4 occurred in the last 7 years.
- 70.0% of the incidents occurred in either a commerce/business or educational environment.
- Shootings occurred in 40 of 50 states and the District of Columbia.
- 60.0% of the incidents ended before police arrived.

FIGURE 28: Infographic on active Shooter Incidents [FBI, 2018]



Incidents with the highest casualty counts

- Route 91 Harvest Festival, Las Vegas, NV: 547 [58 killed, 489 wounded], October 1, 2017
- Pulse Night Club, Orlando FL: 102 [49 killed, 53 wounded], June 12, 2016
- Cinemark Century 16 Theater in Aurora, Colorado: 70 [12 killed, 58 wounded], July 20, 2012.
- Virginia Polytechnic Institute and State University in Blacksburg, Virginia: 49 [32 killed, 17 wounded], April 16, 2007.

Shooters

- All but 2 incidents involved a single shooter.
- In at least 9 incidents, the shooter first shot and killed a family member[s] in a residence before moving to a more public location to continue shooting.
- In at least 6 incidents, the shooters were female.
- In 64 incidents [40.0%], the shooters committed suicide; 54 shooters did so at the scene of the crime.
- At least 5 shooters from 4 incidents remain at large.

| RISK ASSESSMENT |

PAST OCCURRENCES

On October 15, 1992, a shooting occurred at Schuyler County offices in Watkins Glen. A man with a history of arrests for nonpayment of child support fatally shot four Social Services Department employees and himself. While several other incidents have occurred throughout the state, there are two recent notable incidents, one occurring in Herkimer County and the other in Broome County.

Herkimer County: In March 2013, a man set fire to his apartment in the Village of Mohawk and then proceeded to the neighboring Village of Herkimer, where he shot six people, killing four, and barricaded himself for hours before dying in a gunfight with police tactical units after he shot and killed a police K9.

Broome County: In April 2009, a man wearing a bulletproof vest barricaded the rear entrance of the American Civic Association building in Binghamton. He then entered the building through the front door and opened fire. He wounded four people and killed thirteen others before taking his own life.

PROBABILITY OF FUTURE EVENTS

The probability a future active shooter event occurring in Schuyler County is fully unknown and impossible to determine accurately. CEPA participants rated the likelihood as a medium given the potential range of locations in which such an incident could potentially occur and the increasing frequency of these incidents nationwide.

If any actionable intelligence exists to indicate an increased threat of an active shooter incident within Schuyler County, information is shared with and obtained from the New York State Intelligence Center [NYSIC] as well as police departments, including the New York State Police, Schuyler County Sheriff's Office, and Watkins Glen Police Department. Additionally, the FBI provides operational, behaviorally-based threat assessment and threat management services to help detect and prevent acts of targeted violence, helping academic, mental health, business, community, law enforcement, and government entities recognize and disrupt potential active shooters who may be on a trajectory toward violence. The Bureau also continues its research to identify indicators that could signal potential violent intent.

POTENTIAL IMPACT – LOCATION AND SEVERITY

The main impact of active shooter events is the loss of and/or injury to human life. In addition, there is the psychological trauma experienced by all those directly involved in an event, by the families of those involved, and by the wider community.

The busy commercial and tourist areas of Schuyler County, as populated open areas, can be particularly susceptible to a high-impact event such as an active shooter. While schools and other facilities have some security procedures in place, the ability of a potential shooter to gain access is still possible.

Active shooter events often include some damage to buildings from the gunfire involved. In addition, a decision is often made after an event to either renovate areas where most of the incident took place or to totally demolish a building.

Schools and other facilities must take the possibility of active shooter events into account in all future development and capital improvements. Secured single points of entry and escorted access are important to aid in protection against unwanted intruders. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

PANDEMIC [RELATIVE RISK SCORE: 12]

A pandemic is defined as a disease affecting or attacking the population of an extensive region, including several countries and/or continents. It is further described as an extensive epidemic. Generally, pandemic diseases cause sudden, pervasive illness in all age groups on a global scale. Pandemic events cover a wide geographic area and can affect large populations, including the entire population of Schuyler County, depending on the disease. The exact size and extent of an infected population is dependent upon how easily the illness is spread, the mode of transmission, and the amount of contact between infected and non-infected persons.

Schuyler County is particularly concerned with the possibility of a pandemic influenza outbreak. Pandemic influenzas had become a particular concern in the late 1990s with the H5N1 [avian] flu outbreaks in Asia, Africa, Europe, the Pacific, and the Near East, although pandemic influenzas have impacted the world throughout history. In March of 2020, the COVID-19 Pandemic impacted the entire world and changed how the county ran its daily operations, with employees working remotely and meeting virtually for several months.

Influenza, commonly known as ‘the flu’, is a contagious disease that is caused by the influenza virus and most commonly attacks the respiratory tract in humans. Influenza is considered to have pandemic potential if it is novel, meaning it is a unique strain to which people have no immunity; virulent, meaning that it causes deaths to normally healthy individuals; and is easily transmittable from person to person.

PAST OCCURRENCES

There have been several pandemic influenza outbreaks which have occurred over the past century. A list of events world-wide is show in Table 22.

TABLE 22: List of Previous Significant Influenza Outbreaks of the Past Century [CDC, 2021]

DATE	PANDEMIC NAME/ SUBTYPE	WORLD-WIDE DEATHS [APPROX]	US DEATHS [APPROX]
1918 - 1919	Spanish Flu/H1N1	50 million	675,000
1957 - 1958	Asian Flu/H2N2	1.5-2 million	70,000
1968 - 1969	Hong Kong Flu/H3N2	1 million	33,800
2009 - 2010	Swine Flu/2009 H1N1	150-575,000	12,469
2020 - ongoing	COVID-19	3 million*	570,000*

*The COVID-19 pandemic is still ongoing as of the writing of this plan, and the number provided are reflective of April 2021

Severe acute respiratory syndrome [SARS] is a viral respiratory illness caused by a coronavirus first reported in Asia in February 2003. Over the next few months the illness spread to more than two dozen countries in North America, South America, Europe, and Asia before it was contained. According to the CDC, over 8,000 people world-wide became ill with SARS, resulting in 774 deaths. There were only eight confirmed cases in the United States with no fatalities. Infections and fatalities were alarmingly high in Canada, which caused great concern in the United States.



| RISK ASSESSMENT |

PROBABILITY OF FUTURE EVENTS

There will be continued occurrences of pandemic influenza outbreaks. Due to their infrequency, better estimates can not be obtained but based upon historical events, Schuyler County is expected to experience pandemic influenza outbreaks every 11 to 41 years. According to HHS, occurrences seem most likely to occur when the Influenza Type A virus makes a dramatic change that results in a new or 'novel' virus to which the population has no immunity. The emergence of a novel virus is the first step toward a pandemic.

Schuyler County's tourism industry brings a great deal of visitors from across the county, as well as around the world. These visitors could potentially be infected with an influenza virus which could be transmitted to others. Like other popular tourist destinations, this does make us more vulnerable to the potential of an outbreak. Based on historic pandemic occurrences, the probability of future events in Schuyler County is likely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Certain population groups are at higher risk of pandemic flu infection. This population group includes people 65 years and older, children younger than 5 years old, pregnant women and people of any age with certain chronic medical conditions. Such conditions include but are not limited to diabetes, heart disease, asthma, and kidney disease [CDC, 2009]. Schools, convalescent centers, and other institutions serving those younger than 5 years old and older than 65 years old are locations conducive to faster transmission of pandemic influenza since populations identified as being at high risk are concentrated at these facilities. Additionally, a pandemic influenza event can have significant economic and continuity of operations impact as individuals are sick, family members remain home to care for them, and people may isolate themselves to prevent contracting the illness. Based on this analysis, Schuyler County has a limited potential for severe impact.

Schuyler County's limited medical facilities could become overwhelmed in the event of such an outbreak. An occurrence like this, or threat of an occurrence, would result in the activation of our Schuyler County Continuation of Operations Plan - Public Health Emergency.

MAJOR TRANSPORTATION ACCIDENT [RELATIVE RISK SCORE: 9]

Transportation accidents are a regular occurrence in every jurisdiction; however, major accidents can and do occur. The New York State Department of Motor Vehicles identified 447,021 crashes reported statewide to them in 2019, which is the most recent data available. The greatest threat of major accidents in Schuyler County comes from large trucks and buses, with distracted driving and environmental factors being of greatest concern. Also considered in this hazard are major transportation accidents which could occur on Seneca Lake, our largest navigable waterbody.

PAST OCCURRENCES

There have been no past occurrences of major transportation accidents in Schuyler County.

PROBABILITY OF FUTURE EVENTS

The probability of future major transportation accidents is likely given the number of large trucks traversing state highways through the county, school buses throughout the county, tour buses in high-volume tourist areas such as Watkins Glen, and tour boats on Seneca Lake. While safety records in our area have been excellent to date, accidents can occur.

POTENTIAL IMPACT – LOCATION AND SEVERITY

As previously identified, potential locations for major transportation accidents include virtually every roadway in the county when large trucks, school buses, and tour buses are accounted for. Seneca Lake is also a potential impact location. Major transportation accidents are characterized by significant property damage and significant threat to life, which could potentially result in a mass casualty and/or mass fatality incident. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

BIOLOGICAL AGENT RELEASE [RELATIVE RISK SCORE: 8]

The release of a biological agent on any community would be devastating. While of a low probability that Schuyler County would be threatened by such an occurrence, the targets of terrorist organizations and homegrown violent extremists can be difficult to predict.

PAST OCCURRENCES

No previous occurrences have taken place in Schuyler County.

PROBABILITY OF FUTURE EVENTS

Based on historic biological agent release occurrences, the probability of future events in Schuyler County is unlikely

POTENTIAL IMPACT – LOCATION AND SEVERITY

Depending on the type of agent used and the method of dispersal, the location of the event could be isolated or widespread. While any incident of this nature is greatly concerning, the highest impact would certainly be in a population center where a great number of people could potentially be exposed. EMS and the healthcare system would likely be quickly overwhelmed with responders and healthcare providers also potentially exposed. Outside assistance from the state health department and other entities, such as the Centers for Disease Control [CDC] or the US Army Medical Research Institute of Infectious Diseases [USAMRIID] would likely be necessary. Along with the immediate threat to life would be likely impact to government continuity, commerce, and potentially agriculture. Based on this analysis, Schuyler County has a minor potential for severe impact.

IMPROVISED EXPLOSIVE DEVICE [IED]/VEHICLE BORN IED [RELATIVE RISK SCORE: 8]

The impact of IEDs, similar to other terrorist-type events, can be devastating to the community. The probability of such an event in Schuyler County is relatively low, but the impacts could be severe. This threat can range from a small explosive, such as a pipe bomb, to a larger device, such as one packed into a vehicle. An IED attack could be brought by a terrorist organization or a homegrown violent extremist. The agricultural and rural area provides access to materials which can be used in many IEDs.

PAST OCCURRENCES

No previous occurrences have taken place in Schuyler County.

PROBABILITY OF FUTURE EVENTS

Based on historic IED occurrences, the probability of future events in Schuyler County is unlikely

POTENTIAL IMPACT – LOCATION AND SEVERITY

Depending on the nature of the device used and the location of its use, the impact could be isolated or severe. Of greatest concern would be the detonation of a device in or near population centers or critical infrastructure. Explosions can cause mass casualty and mass fatality events which would require immediate outside assistance. The damage to critical infrastructure could have high consequences depending on the nature of the infrastructure. Based on this analysis, Schuyler County has a minor potential for severe impact.

| RISK ASSESSMENT |

RADIOLOGICAL DISPERSAL DEVICE [RDD] [RELATIVE RISK SCORE: 8]

An RDD, similar to an IED, is of a low likelihood to occur but would have significant impact.

PAST OCCURRENCES

No previous occurrences have taken place in Schuyler County.

PROBABILITY OF FUTURE EVENTS

Based on historic RDD occurrences, the probability of future events in Schuyler County is unlikely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Depending on the nature of the device used and the location of its use, the impact could be isolated or severe. Of greatest concern would be the detonation of a device in or near population centers or critical infrastructure. Explosions can cause mass casualty and mass fatality events which would require immediate outside assistance. The addition of radiological material to the explosive device contributes the potential for widespread contamination of areas, rendering them unusable for a great period of time. The damage to critical infrastructure could have high consequences depending on the nature of the infrastructure.

Depending on the nature of the device used and the location of its use, the impact could be isolated or severe. Of greatest concern would be the detonation of a device in or near population centers or critical infrastructure. Explosions can cause mass casualty and mass fatality events which would require immediate outside assistance. The addition of radiological material to the explosive device contributes the potential for widespread contamination of areas, rendering them unusable for a great period of time. The damage to critical infrastructure could have high consequences depending on the nature of the infrastructure. Based on this analysis, Schuyler County has a minor potential for severe impact.

ANIMAL DISEASE/FOREIGN ANIMAL DISEASE [RELATIVE RISK SCORE: 6]

Animal diseases are a constant threat to the ecology of every area of New York State. While some diseases only impact animal populations, which alone can be significant, others are transmissible to humans. Some animal diseases, such as rabies or West Nile Virus, are ever-present, while others which do not currently exist in the area are monitored by state agencies through risk-based surveillance.

PAST OCCURRENCES

There have been no significant past occurrences of animal disease or foreign animal disease in Schuyler County.

PROBABILITY OF FUTURE EVENTS

Diseases such as rabies and West Nile Virus are already present in Schuyler County and are likely to continue their presence. Other animal diseases, such as duck viral enteritis [DVE], avian influenza, and chronic wasting disease [CWD] are not currently present but are watched for by the New York State Department of Conservation and other agencies. Migratory patterns, pathogen virulence, and other environmental conditions present a unlikely probability of disease outbreaks in Schuyler County.

POTENTIAL IMPACT – LOCATION AND SEVERITY

The impact to animals, both wild and domestic/agricultural, as well as the potential for transmission to humans across the spectrum of potential diseases warrants a moderate severity rating for animal disease and foreign animal disease. Based upon the rarity of most of these diseases, state agencies such as the Department of Environmental Conservation, Agricultural and Markets, and the Department of Health are highly engaged in monitoring and responding to any such incidents to reduce their severity. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

HAZMAT RELEASE [FIXED FACILITY] [RELATIVE RISK SCORE: 6]

The release of hazardous materials from a fixed facility can result in death or injury to people and/or damage to property and the environment through the material's flammability, toxicity, corrosiveness, chemical instability, and/or combustibility.

Fuel stations and distribution sites pose the greatest hazard, as do locations within the county that use and/or process chemicals for industrial or agricultural purposes. Facilities are required to be in compliance with reporting and safety measures, which reduce potential risk.

PAST OCCURRENCES

There have been no significant historical occurrences of fixed facility hazardous materials released in Schuyler County.

PROBABILITY OF FUTURE EVENTS

The likelihood of a fixed facility hazardous materials incident in Schuyler County is rated as low. As only several facilities store hazardous materials in any significant quantity and these facilities are required to be in compliance with reporting and safety measures, the probability of future events is unlikely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

A fixed facility hazardous materials release could occur at any fuel station, farm, or industrial location within the county which has hazardous materials present. In the event of a release, serious injury or death is likely, but not in large numbers. A release could result in moderate damage to property and structures. Based on this analysis, Schuyler County has a limited potential for severe impact.

INTERNET CONNECTIVITY FAILURE/COMMUNICATION FAILURE [RELATIVE RISK SCORE: 6]

The potential impact of a communication failure could be significant to public safety and the operations of business and government. While periodic outages occur, typically due to storm activity, these are usually isolated and restored within hours.

PAST OCCURRENCES

There have been no significant historical occurrences of communication failures of long duration in Schuyler County.

PROBABILITY OF FUTURE EVENTS

While occurrences of isolated and short duration outages are certain to continue, the likelihood of a major, long duration outage is unlikely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Communication failures of significance would include an outage of any duration impacting the 911 Center and a communication outage impacting any area for a long duration. Also of concern would be a communication outage during a large event, such as a NASCAR event at Watkins Glen International. The severity, overall, of a major communication failure would be moderate. The County's relationship with communication providers as well as availability of alternative means of communication aid in lessening the severity of impact. In 2015 a new emergency radio communication system is being implemented, which was included the installation of two new towers [Tyrone and Hector] which will aid in coverage and redundancy. An additional tower is being planned at the Bradford Central School. Based on this analysis, Schuyler County has a limited potential for severe impact.

| RISK ASSESSMENT |

SUSTAINED POWER OUTAGE [THREE DAYS OR MORE] [RELATIVE RISK SCORE: 6]

Like communication outages, isolated power outages generally occur a few times a year, typically due to storm activity, with services restored in less than a day. The impacts of outages can range from being a general inconvenience, to impacting government and business operations, to impacting life and safety. While most locations which would suffer the greatest impacts tend to have emergency power generation, not all do. Sustained power outages are an exception to these occurrences and can potentially have great impact, although they are generally mitigated through the same means.

PAST OCCURRENCES

No sustained outage events have occurred in recent history.

PROBABILITY OF FUTURE EVENTS

Rapid response of utility providers, aided by mutual aid as needed, significantly reduces the likelihood of a sustained power outage as the result of an incident. The probability of a future sustained power outage event in Schuyler County is unlikely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Due to the circumstances which would incite a sustained power outage, the root event would likely be regional and come as a result of significant infrastructure failure, such as from a major ice storm. The severity of impact, despite the duration of the event, would generally be low as most critical facilities already have emergency power generation. Those which do not have been identified, with projects included in this plan to obtain emergency power generation for them. As with any event affecting significant numbers of people, impacted populations would have the option of sheltering. Based on this analysis, Schuyler County has a limited potential for severe impact.

IMPROVISED NUCLEAR DEVICE [IND] [RELATIVE RISK SCORE: 5]

According to the US Department of Homeland Security, an improvised nuclear device [IND] is different from a radiological dispersion device [RDD] as an IND involves the use of a device to produce a nuclear explosion. An IND is a crude nuclear device built from components of a stolen weapon or from scratch using nuclear material [plutonium or highly enriched uranium]. The primary obstacle to a nuclear attack is limited access to weapon-grade nuclear materials.

PAST OCCURRENCES

There have been no historical occurrences of IND events in Schuyler County.

PROBABILITY OF FUTURE EVENTS

The probability of a future IND event in Schuyler County is very unlikely

POTENTIAL IMPACT – LOCATION AND SEVERITY

An IND event in Schuyler County would have a very high impact, resulting in substantial fatalities, injuries, and infrastructure damage from the heat and blast of the explosion. Significant radiological consequences from both the initial nuclear radiation as the radioactive fallout that settles after the initial event would contaminate the area for many years. The area impacted depends on the yield of the device and location of initial detonation. Based on this analysis, Schuyler County has a major potential for severe impact.

| RISK ASSESSMENT |

NATURAL GAS/PROPANE STORAGE [RELATIVE RISK SCORE: 4]

The hazard of natural gas and/or propane storage comes from local storage of retail distributors and filling stations as well as salt cavern storage facilities in the Town of Reading.

PAST OCCURRENCES

There have been no historical events related to natural gas/propane storage in Schuyler County.

PROBABILITY OF FUTURE EVENTS

Based upon the stability of these facilities and regulations in place to ensure safety, the likelihood of a future natural gas/propane storage event is unlikely.

POTENTIAL IMPACT – LOCATION AND SEVERITY

Should an incident occur, it would likely be isolated to the area proximate to the storage facility. Given storage regulations and requirements and the locations of these facilities, the severity of potential impacts would be limited.

RADIOLOGICAL RELEASE [FIXED-SITE] [RELATIVE RISK SCORE: 2]

The only potential threat of a fixed-site radiological release is from a limited number of medical facilities which possesses a small quantity of radioactive isotope for medical purposes.

PAST OCCURRENCES

There have been no historical occurrences of fixed site radiological release in Schuyler County.

PROBABILITY OF FUTURE EVENTS

The likelihood of a future fixed site radiological release is unlikely

POTENTIAL IMPACT – LOCATION AND SEVERITY

Radiation sources, including those used in medical applications, are highly regulated and strictly secured. As such, any release would likely be isolated to the medical facilities. The severity of such a release would be limited, as the material is not likely to be disbursed in any manner. Based on this analysis, Schuyler County has a minor potential for severe impact.

| RISK ASSESSMENT |

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| COMMUNITY RESILIENCE |

COUNTY HAZARD MITIGATION EFFORTS

Hazard mitigation is an ongoing endeavor as we continue to reduce our vulnerability to and impacts from the hazards that threaten our communities. Through the years a number of hazard mitigation projects have been completed in Schuyler County. Historically, one of the most extensive projects was the Montour Falls Flood Damage Reduction Project. This project, implemented by the State of New York in the 1950s, included the excavation of a diversion channel for Catharine Creek and levees and berms around the diversion channel and Shequaga Creek to contain flooding.

Schuyler County Soil and Water Conservation District has worked with county and local agencies on dozens of hazard mitigation projects throughout the county, most with a focus on flood mitigation.

PAST PROJECTS

In addition to these projects, a number of other hazard mitigation projects have been implemented in Schuyler County. Table 23 summarizes the scope of these projects.

TABLE 23: Implemented Projects Since Last Update [Schuyler County Emergency Management, 2022]						
JURISDICTION	ISSUE	PROJECT; FUNDING SOURCE; AND DAMAGES AVOIDED	LEAD IMPLEMENTING AGENCY	OTHER OPTIONS CONSIDERED	HOW WELL THE PROJECT PERFORMED AND LESSONS LEARNED	DESCRIBE FACTORS THAT CHALLENGED OR SUPPORTED SUCCESSFUL IMPLEMENTATION
County-wide	Provide residents and visitors access to preparedness information online	Schuyler County website, Facebook page, and Twitter account have been established and are actively used; county budget; provides awareness of hazards and initial actions as well as access to additional information	Schuyler County Emergency Management Office	None.	Feedback on media has been positive.	All agencies responsible for maintaining information.

|COMMUNITY RESILIENCE|

TABLE 23: Implemented Projects Since Last Update [Schuyler County Emergency Management, 2022]

JURISDICTION	ISSUE	PROJECT; FUNDING SOURCE; AND DAMAGES AVOIDED	LEAD IMPLEMENTING AGENCY	OTHER OPTIONS CONSIDERED	HOW WELL THE PROJECT PERFORMED AND LESSONS LEARNED	DESCRIBE FACTORS THAT CHALLENGED OR SUPPORTED SUCCESSFUL IMPLEMENTATION
County-wide	Provide residents with access to emergency alerts	Handed out NOAA weather radios in the past, also promote use of NY-Alert, for mobile messaging; county budget; provides lifesaving notice of emergencies	Schuyler County Emergency Management Office	New York Alert does not have all capabilities available that Ping4Alerts does.	Systems have worked well.	Availability of NOAA Weather Radios is limited due to funding constraints.
County-wide	Addressing county and local roadway drainage and stormwater management issues - Purchase 'M River' training prop for training local highway departments	Schuyler County SWCD purchased the training materials, and several training were offered and continues to be offered yearly.	Schuyler County SWCD	None	The project has been well received and continues to provide critical stream maintenance training.	Funding for projects is a continued need. Partnerships with municipalities and Soil and Water Conservation District have brought great success.
Town of Cayuta	Reduction of flood hazards to roads and surrounding areas	Replace culvert #104, an 18" culvert with 24" culvert, under Burlingame Road. Town Budget	Schuyler County Soil and Water SWCD Town of Cayuta Highway Department	Culvert replacement and enlargement, was the most cost effective option.	Flood impact to the local road was reduced	Partnerships with municipalities and Soil and Water Conservation District have brought great success.
Town of Cayuta	Reduction of flood hazards to roads and surrounding areas	Replaced culvert #113 under Decker Road with a 12' box culvert Town Budget	Schuyler County SWCD Town of Cayuta Highway Department	Culvert replacement and enlargement, was the most cost effective option.	Flood impact to the local road was reduced	Partnerships with municipalities and Soil and Water Conservation District have brought great success.

|COMMUNITY RESILIENCE|

TABLE 23: Implemented Projects Since Last Update [Schuyler County Emergency Management, 2022]

JURISDICTION	ISSUE	PROJECT; FUNDING SOURCE; AND DAMAGES AVOIDED	LEAD IMPLEMENTING AGENCY	OTHER OPTIONS CONSIDERED	HOW WELL THE PROJECT PERFORMED AND LESSONS LEARNED	DESCRIBE FACTORS THAT CHALLENGED OR SUPPORTED SUCCESSFUL IMPLEMENTATION
Town of Dix	Addressing local roadway drainage and stormwater management	Perform bank stabilization on Shequaga Creek @ Cronk Road Town Budget	Schuyler County SWCD Town of Dix Highway Department	None	Reduced risk to Cronk road as a result of stream bank erosion.	Partnerships with municipalities and Soil and Water Conservation District have brought great success.
Town of Orange	Reduction of flood hazards to roads and surrounding areas	Installed box culvert and performed stream stabilization at Sexton Hollow Road near Corbett Hollow Road Town Budget	Schuyler County SWCD Town of Orange Highway Department	Culvert replacement and enlargement, was the most cost effective option.	Flood impact to the local road was reduced	Partnerships with municipalities and Soil and Water Conservation District have brought great success.
Town of Orange	Reduction of flood hazards to roads and surrounding areas	Replaced culvert #128 at Coon Hollow Road with a larger culvert. Town Budget	Schuyler County SWCD Town of Orange Highway Department	Culvert replacement and enlargement, was the most cost effective option.	Flood impact to the local road was reduced	Partnerships with municipalities and Soil and Water Conservation District have brought great success.
Village of Watkins Glen	Addressing county and local roadway drainage and stormwater management issues	Installed 1000 feet of the shoreline protection along Seneca Lake Village Budget/ Grant funding	Schuyler County SWCD Village of Watkins Glen	None	Flood/ erosion impact has been reduced.	Funding for shoreline stabilization projects is a continued need.

|COMMUNITY RESILIENCE|

TEMPORARY EMERGENCY HOUSING

The need for temporary emergency housing is a challenge that the entire nation faces. While Schuyler County government does not itself possess housing stock, we do have land which can be appropriately made available for temporary emergency housing in the form of manufactured homes. The pre-identification of sites and needs to support housing is important to preparedness and hazard mitigation. Two main locations within the county have been identified:

- Schuyler County Business Park [2141 State Route 414, Town of Dix]. This central area would be Schuyler County's primary site for temporary emergency housing. The site currently has one 30,000SF building on approximately 14 acres of the site, leaving 33.8 acres to accommodate emergency housing. This site is well above the 500 year floodplain, and has road access to water, sewer, and electricity. The rear of the site is also accessible by rail. Accounting for access roads and a small pond, the site should be suitable for an approximate 305 housing units, using USACE estimates [9 units per acre].
- In eastern Schuyler County, an area has been identified for use behind Hector Fire Station at 5736 State Route 414 in Hector. This area is above the floodplain and has road access to water and electric. At approximately 9 acres, the site could accommodate about 80 housing units.

EVACUATION PLANNING

In the event of a life threatening situation, the safe and orderly evacuation of people and domestic animals may be necessary. The Schuyler County Transportation and Emergency Evacuation Plan can be found as an appendix to the Schuyler County Comprehensive Emergency Management Plan [CEMP].

Emergency shelters are located at the following locations:

- Bradford Central School, Town of Orange
- Odessa-Montour Central School [CSD], Village of Odessa
- Watkins Glen High School, Village of Watkins Glen
- Watkins Glen Elementary School, Village of Watkins Glen

Schuyler County works with the American Red Cross to manage shelters. Opening and closing of shelters is done at the request of the Emergency Management Office. Schuyler County Public Health provides screening and evaluation for special needs services. It is anticipated that a new Mass Care and Sheltering plan will be developed in the near future.

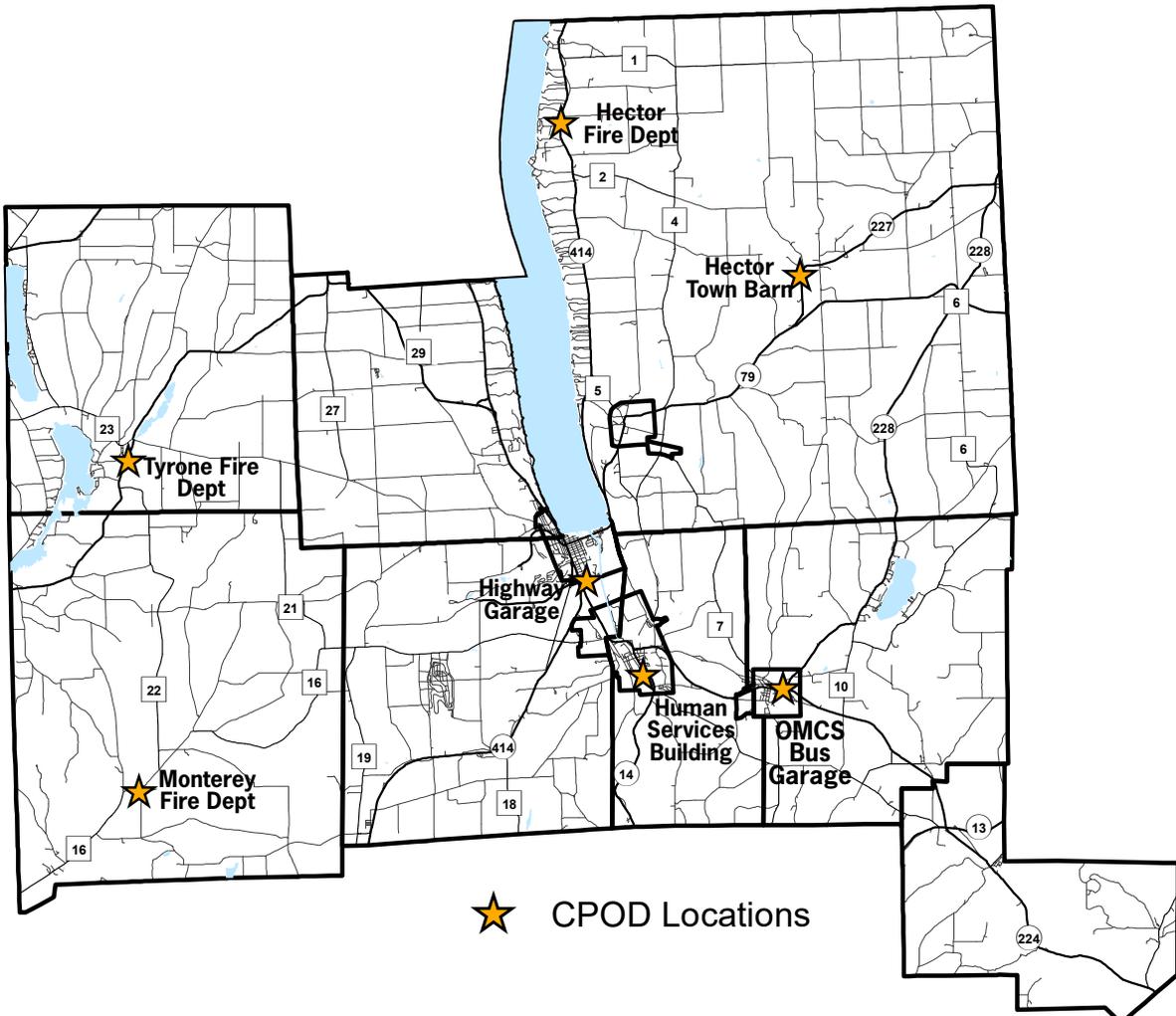
[COMMUNITY RESILIENCE]

COMMODITY POINTS OF DISTRIBUTION

Most often, evacuation and relocation are not necessary in the aftermath of a disaster. Residents may, however, require some support based upon the impacts of the disaster. The pre-identification of sites for the distribution of supplies to residents is an important component of emergency planning. Several of these sites, called commodity points of distribution [CPODs], have been identified throughout the county. These sites would distribute supplies such as drinking water, tarps, batteries, and food to residents in need. Figure 29 and Table 24 show the locations identified for CPOD use, which would be staffed, supplied, and activated as necessary.

TABLE 24: Schuyler County CPOD Locations [Schuyler County Emergency Management, 2022]		
FACILITY	LATITUDE	LONGITUDE
Hector Fire Department	42.51105	-76.876
Hector Town Barn	42.46421	-76.7765
Schuyler County Human Services Building	42.34081	-76.8412
Monterey Fire Department	42.30427	-77.0502
Odessa-Montour Central School Bus Garage	42.33683	-76.7832
Schuyler County Highway Garage	42.3547	-76.9603
Tyrone Fire Department	42.40622	-77.0554

FIGURE 29: Schuyler County - CPOD Locations



|COMMUNITY RESILIENCE|

POTENTIAL FUNDING SOURCES

There are a number of potential funding sources which can be accessed to financially support identified hazard mitigation projects. In addition to county and local budgets, which may be used to support small projects or contribute matching funds for larger projects, the following list includes many potential funding sources. Other sources may exist based upon the scope of the specific project to be funded. Links for each program are provided for additional information.

- **FEMA Hazard Mitigation Grant Program [HMGP].** The purpose of the HMGP is to help communities implement hazard mitigation measures following a Presidential major disaster declaration.
 - <https://www.fema.gov/grants/mitigation/hazard-mitigation>
- **FEMA Pre-Disaster Mitigation Grants [PDM].** The PDM program is designed to assist states, territories, tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program.
 - <https://www.fema.gov/grants/mitigation/pre-disaster>
- **FEMA Flood Mitigation Assistance Program [FMA].** The goal of the FMA program is to reduce or eliminate claims under the National Flood Insurance Program through grants to states, tribes, and communities for measures that reduce or eliminate the long-term risk of flood damage to structures insured under NFIP.
 - <https://www.fema.gov/grants/mitigation/floods>
- **FEMA [Local] Emergency Management Performance Grant [LEMPG].** LEMPG represents the county and local government share of the EMPG which is part of the State Homeland Security Grant Program. EMPG funding is intended to support preparedness efforts across all hazards.
 - <https://www.fema.gov/grants/preparedness/emergency-management-performance>
- **FEMA/NFA Assistance to Firefighters Grant Program [AFG].** AFG encompasses several grant programs which support the needs of fire departments and non-affiliated EMS organizations.
 - <https://www.fema.gov/grants/preparedness/firefighters>
- **FEMA Emergency Operations Center Grant Program.** The EOC Grant Program is intended to provide funds for improving emergency management and preparedness capabilities by supporting flexible, sustainable, secure, and interoperable EOCs with a focus on addressing identified deficiencies and needs.
 - <https://www.fema.gov/grants/preparedness/emergency-operations-center>
- **DHS National Exercise Program [NEP] Exercise Support.** Exercise support is available for select exercises through subject matter expertise and technical assistance in the design, conduct, and evaluation of exercises. This is not a grant program but does provide direct assistance to selected exercises.
 - <https://www.dhs.gov/national-exercise-program>
- **USDA Rural Development Grants and Loans.** The USDA provides a number of grant opportunities to rural communities for the development of communities, community services, and utilities, business and industry, environmental areas, and community facilities.
 - <https://www.rd.usda.gov/programs-services/business-programs/rural-economic-development-loan-grant-program>
- **USDA Natural Resources Conservation Service [NRCS].** NRCS grants provide funding opportunities for projects which help reduce soil erosion, enhance water supplies, and reduce damages caused by floods and other natural disasters.
 - <https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>
- **National Forest Service Grants.** The National Forest Service, a department with the USDA, provides grants for habitat improvement and other projects.
 - <https://www.fs.usda.gov/working-with-us/grants>
- **HUD Community Development Block Grants [CDBG].** The CDBG program is a flexible program providing communities with resources to address a wide range of unique community development needs.
 - https://www.hud.gov/program_offices/comm_planning/cdbg

|COMMUNITY RESILIENCE|

- **National Fish and Wildlife Foundation [NFWF].** The NFWF supports conservation efforts around the nation with numerous general and targeted grant opportunities. Their site should be referenced often for newly released grant opportunities.
 - <https://www.nfwf.org/>
- **Upper Susquehanna Coalition [USC].** The USC provides funding opportunities for a variety of projects which benefit water quality and natural resources within the basin.
 - www.uppersusquehanna.org/usc
- **United States Environmental Protection Agency [EPA] Grants.** The EPA provides a number of grant opportunities for ecosystem restoration, dredging, wetlands, watershed, and water and wastewater projects.
 - <https://www.epa.gov/grants>
- **Federal Highway Administration [FHWA] Grants.** The FHWA administers several grant programs to improve and maintain local roads and related infrastructure.
 - <https://highways.dot.gov/research/technology-innovation-deployment/grant-programs>
- **National Highway Traffic Safety Administration [NHTSA] Grants.** The NHTSA provides grant programs to increase safety and reduce deaths, injuries, and economic losses from motor vehicle accidents.
 - <https://www.nhtsa.gov/highway-safety-grants-program>
- **US Army Corps of Engineers [USACE] Mission Appropriations.** The USACE does not provide grants, but receives budget appropriations to further their mission of providing assistance to state and local governments on a variety of studies and engineering projects, many related to flood mitigation.
- **Grants.gov.** The Grants.gov website is fully searchable and should be checked regularly for newly released and recurring grant opportunities from a variety of federal agencies.
 - <https://www.grant.gov>
- **NYS DEC Water Quality Improvement Project Program [WQIP].** Funding is made available for municipalities, soil and water conservation districts, and non-profit organizations for projects that reduce polluted runoff, improve water quality, and restore habitat in New York's waterbodies.
 - <https://www.dec.ny.gov/pubs/4774.html>
- **New York State Department of State Grants Listing.** The New York State Department of State provides an updated listing of grant opportunities for county and local governments.
 - <https://dos.ny.gov/funding-bid-opportunities>
- **New York State Office of Parks, Recreation, and Historic Preservation [OPRHP] Grants.** OPRHP provides matching grant funds for the improvement of parks and historic properties.
 - <https://parks.ny.gov/grants/>
- **NYS Department of Homeland Security and Emergency Services [DHSES] Grants.** DHSES administers a number of grants through the State Homeland Security Grant Program and other sources.
 - <https://www.dhSES.ny.gov/grant-programs>
- **Elected Official Funding Allocations.** Funding allocations for certain projects may be provided through your US Senate and Congressional representatives.

|COMMUNITY RESILIENCE|

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|LONG-TERM| |VULNERABILITY REDUCTION|

GOALS AND POLICIES

Most hazards cannot be eliminated, however steps can be taken through hazard mitigation to reduce the likelihood of occurrence and lessen the severity of impact. After reviewing the Community Emergency Preparedness Assessment [CEPA] data for Schuyler County, the Hazard Mitigation Committee formulated twelve hazard mitigation goals. These goals build on and are fully consistent with goals previously identified in the following plans:

- Schuyler County Comprehensive Plan [2015]
- Schuyler County Hazard Mitigation Plan [2016]
- Flood Mitigation Action Plan [1999]
- New York State Standard Multi-Hazard Mitigation Plan [2019]

The focus of the 2021 -2026 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County. The outcome of the comprehensive profiling, assessment and ranking of 28 hazards resulted in the determination that the following eight hazards are considered to be of the highest risk to the County and will be addressed through appropriate mitigation actions and activities:

- Flooding
- Severe Wind/Tornado
- Cyber Attack
- Severe Winter Storms
- Ice Storms
- Pandemic
- Active Shooter
- HazMat Release [In transit]

Other hazards that were ranked as low based on frequency, probability, and/or magnitude may be generally addressed through 'all hazards' projects, but are not specifically addressed by mitigation actions or activities in this plan. All hazards will be reevaluated for the next plan update.

|LONG-TERM VULNERABILITY REDUCTION|

The hazard mitigation goals for Schuyler County are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

Compared to the goals and priorities of the 2015 Schuyler County Hazard Mitigation Plan, the goals and priorities of this plan have not changed but have been expanded upon.

|LONG-TERM VULNERABILITY REDUCTION|

HAZARD MITIGATION STRATEGIES

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives to identify activities needed to achieve the goal. The strategies and recommended activities presented document the approach that Schuyler County and its municipalities intend to follow to reduce the local vulnerability to high-priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals outlined in the plan obviously requires an ongoing commitment to hazard mitigation with the implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first the primary hazard addressed. However, not all top hazards are explicitly identified, as several have mitigation actions addressed through either all-hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with the project, action, or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

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When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

MUNICIPAL INTEGRATIONS OF HAZARD MITIGATION STRATEGIES

Once this plan receives FEMA approval, it will be formally adopted by the county through legislative resolution. The County Director of Emergency Services will then ensure that each jurisdiction within the county is provided with a copy of the plan, encouraging each to similarly adopt the plan through action of their respective town and village boards.

The strategies presented in this plan will be integrated into other county and municipal plans as those documents are updated. This will be facilitated by the Schuyler County Planning Director, who is an active member of the Hazard Mitigation Committee. When appropriate, the goals of this plan will be met through inclusion in capital improvement and economic development plans, master plans, zoning and land use plans and ordinances, and other appropriate planning and regulatory actions.

Municipal integrations of hazard mitigation strategies include the following opportunities, at a minimum:

JURISDICTION	COMPREHENSIVE PLAN/ LAND USE PLAN	ZONING
Town of Catharine	Plan is current. Integration will likely occur in future updates.	Zoning regulations are in place. Integration opportunities will be reviewed
Town of Cayuta	No Comprehensive Plan in place. Integration will be encouraged as part of plan development.	No zoning regulations are in place. Integration will be encouraged as part of regulation development
Town of Dix	A current plan is in place, but is dated. Integration will be encouraged with update.	Zoning regulations are in place. Integration opportunities will be reviewed
Town of Hector	A current plan is in place. Integration will be encouraged with future updates.	No zoning regulations are in place. Integration will be encouraged as part of regulation development

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JURISDICTION	COMPREHENSIVE PLAN/ LAND USE PLAN	ZONING
Town of Montour	A current plan is in place. Integration will be encouraged with future updates.	Zoning regulations are in place. Integration opportunities will be reviewed
Town of Orange	No Comprehensive Plan in place. Integration will be encouraged as part of plan development.	No zoning regulations are in place. Integration will be encouraged as part of regulation development
Town of Reading	A current plan is in place. Integration will be encouraged with future updates.	No zoning regulations are in place. Integration will be encouraged as part of regulation development
Town of Tyrone	No Comprehensive Plan in place. Integration will be encouraged as part of plan development.	No zoning regulations are in place. Integration will be encouraged as part of regulation development
Village of Burdett	A current plan is in place. Integration will be encouraged with future updates.	No zoning regulations are in place. Integration will be encouraged as part of regulation development
Village of Montour Falls	A current plan is in place. Integration will be encouraged with future updates.	Zoning regulations are in place. Integration opportunities will be reviewed
Village of Odessa	A current plan is in place. Integration will be encouraged with future updates.	Zoning regulations are in place. Integration opportunities will be reviewed
Village of Watkins Glen	A current plan is in place. Integration will be encouraged with future updates.	Zoning regulations are in place. Integration opportunities will be reviewed

Additional opportunities for the integration of hazard mitigation strategies are as follows:

- The 2015 Schuyler County Comprehensive Plan already includes many hazard mitigation strategies which will be reviewed and updated based upon this hazard mitigation plan during the comprehensive plan revision process [scheduled to be reviewed and fully revised every 10 years, at minimum]
- The Schuyler County Water Quality Coordinating Committee Water Resource Strategy includes actions that address flooding and highway drainage concerns. Overlapping membership between that committee and the Hazard Mitigation Planning Committee will ensure consistent and mutually supportive plans.
- The Director of Emergency Services will ensure that the Schuyler County Comprehensive Emergency Management Plan and the Schuyler County Hazard Mitigation Plan are consistent.
- The Flood Mitigation Specialist of the Southern Tier Central Regional Planning and Development Board provides input on flood risks and hazard mitigation in the annual Comprehensive Economic Development Strategy [CEDS] for the Southern Tier Central Region.
- The County Planning Director provides direct assistance to municipalities on planning and land use activities. Part of this assistance will include integration of hazard mitigation techniques, as recommended in this plan.
- The County [through the Building and Grounds Department] and municipalities will establish provisions for county and municipal capital improvement projects for incorporating hazard resistant construction standards into the design, engineering, and location of the project.

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HAZARD MITIGATION ACTION PLAN

The following Hazard Mitigation Action Plan [Table 25] was completed with the input of officials from Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all-hazard mitigation projects identified in this plan. The Hazard Mitigation Plan is organized by type of hazard and priority for easy reference.

TABLE 25: Mitigation Action Plan							
PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A. ALL HAZARDS							
PRIORITY 1 : 1-5 YEARS							
1. DEVELOP AND IMPLEMENT A MULTI-HAZARD PUBLIC AWARENESS PROGRAM							
A.1.1.a	Schuyler County	Hazard Vulnerability Checklist	There is a need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.	Schuyler County Emergency Management Office	Spring 2023	County Budget, EMPG, Health Preparedness Funds	A, D, F, H, I
A.1.1.b	Schuyler County	Provide specific Preparedness information for Tourist & Visitors	There is a need to increase awareness of tourists of hazards that could impact them and how they prepare for them.	Schuyler County Emergency Management Office	2023, ongoing	County Budget, EMPG, Health Preparedness Funds	A, H
A.1.1.c	Schuyler County	Continue participation in state and federal hazard awareness campaigns	A need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.	Schuyler County Emergency Management Office	2023, ongoing	County Budget, EMPG, Health Preparedness Funds	A, B, D, F, H, I, L
A.1.1.d	Schuyler County	Increase Use and awareness of emergency warning and information methodologies.	Ensuring that the public has awareness of free or low cost emergency alert and notification systems helps to ensure that they receive life-saving information when they need it.	Schuyler County Emergency Management Office	2023, ongoing	County Budget, EMPG	A, B, D, F, H, I, L

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PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A.1.1.e	Schuyler County	Develop additional public information campaigns	There is a need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them. There is a need for additional public information campaigns to address certain hazards that either currently exist or may emerge in the future.	Schuyler County Emergency Management Office	Spring 2023, ongoing	County Budget, EMPG, Health Preparedness Funds	A, B, D, H, L
A.1.1.f	Schuyler County	Develop Educational Information about Safe Tree Maintenance	There is a need to increase awareness by residents and businesses of the need to maintain trees to minimize hazards	Schuyler County Highway Department	2021-2026	Soil and Water Conservation Funding Streams	A, B, D, I
2. MONITOR, REVIEW, AND PREPARE ANNUAL UPDATES TO MAINTAIN AN ACTIVE COUNTY HAZARD MITIGATION PROGRAM.							
A.1.2.a	Schuyler County	Maintain an active Hazard Mitigation program	The county works to maintain a proactive and meaningful county-wide all-hazard mitigation plan, and must regularly as a committee to identify any changes in hazard data, at-risk critical facilities, and potential mitigation techniques.	Schuyler County Emergency Management Office	2023	County Budget, EMPG	All
A.1.2.b	Schuyler County	Continuous review/revision of risk assessment	To maintain a proactive and meaningful county-wide all-hazard mitigation plan new data needs to continuously be reviewed and the risk assessment needs to be revised.	Schuyler County Emergency Management Office	2023 - Ongoing	County Budget, EMPG	B
3. INTEGRATE HAZARD MITIGATION INTO COUNTY AND LOCAL DECISION-MAKING							
A.1.3.a	Schuyler County	Locally adopt the Schuyler County Multi-Jurisdiction All-Hazard Mitigation Plan.	Each town and village must locally adopt the Schuyler County Multi-Jurisdiction All-Hazard Mitigation Plan.	Schuyler County, All Town and Village Governments	2023 - to begin after county approval	N/A	All
A.1.3.b	Schuyler County	Integrate hazard mitigation issues into County land Use Regulations	Many hazard mitigation measures are implemented through planning and regulatory activities. Hazard mitigation issues in the adoption of policies and land use regulations must be considered in order for implementation with lasting effect.	Schuyler County Planning Department	2021-2026	County Budget	All

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
4. IDENTIFY NEEDS FOR ADDITIONAL COMPREHENSIVE EMERGENCY PLANNING EFFORTS AND CREATE PLANS IN ACCORDANCE WITH BEST PRACTICES.							
A.1.4.a	Schuyler County	Identification of other emergency Management Planning needs	As Schuyler County continues to maintain a professional comprehensive emergency management program, a periodic assessment of needs must be conducted to ensure that all needs are being met. Identification of other emergency management planning needs to be compiled to maintain a proactive comprehensive emergency management program.	Schuyler County Emergency Management Office	2021-2026	County Budget, EMPG	All
A.1.4.b	Schuyler County	Update County Mass Care and sheltering Plan	The county needs to update its comprehensive mass care and sheltering plan.	Schuyler County Emergency Management Office	2023	County Budget, EMPG, Health Preparedness Funds	B, C, K, L
5. CONDUCT A SERIES OF EXERCISES TO EVALUATE PLANS AND CAPABILITIES							
A.1.5.a	Schuyler County	Develop a Multi-year Training and exercise plan	Develop a multi-year training and exercise plan helps to identify core capabilities to be evaluated through exercises as well as training opportunities to support those capabilities.	Schuyler County Emergency Management Office	2023	County Budget, EMPG, Health Preparedness Funds	B
A.1.5.b	Schuyler County	Design, conduct and evaluate exercises	Existing plans must be exercised in order to validate them.	Schuyler County Emergency Management Office	2021-2026	County Budget, EMPG, Health Preparedness Funds, Other Potential Funding Sources	B, C, G, H, K, L
A.1.5.c	Schuyler County	Make corrective action to existing plans based on exercises	Take corrective action and revise plans based on areas of improvement identified during exercises for all preparedness aspects, including plans, organizations, equipment, and training	Schuyler County Emergency Management Office	2021-2026	County Budget, EMPG, Health Preparedness Funds, Other Potential Funding Sources	B

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
6. CREATE AND DEPLOY CASHES OF SIGNS AND BARRICADES							
A.1.6.a	Schuyler County	Create and Deploy Caches of Signs and Barricades	There is a need to support local capabilities to address traffic issues during an incident	Schuyler County Highway Department	2023	County Budget, Hazard Mitigation Funds	A, B, G, H, K
7. INCREASE RESILIENCY OF CRITICAL FACILITIES AND INFRASTRUCTURE							
A.1.7.a	Schuyler County	Evaluate Critical Facilities and Infrastructure - Essential services	Critical facilities and operations across all of Schuyler County are of a significant age, range of repair, in need of maintenance, and vulnerable to hazards. Many of these are not regularly assessed or have this information provided to the emergency management office for awareness. Evaluative points include structural integrity, vulnerability to hazard events, consequences of loss of utilities, identification of key safety zones, and needed mitigation efforts.	All County, Town and Village Critical Facility Owners and Operators	2021-2026	Facility/ Municipal Budgets	B, C, D, E, I, J, L
A.1.7.b	Schuyler County	Evaluate Critical Facilities and Infrastructure - Emergency Operations	All facility owners and operators need to periodically test emergency operations equipment to ensure functionality and availability. The functionality and availability of emergency operations equipment, such as fire detection and suppression systems, water alarms, CO alarms, security systems, and others, should be evaluated to ensure the continued function and viability of critical facilities.	All County, Town and Village Critical Facility Owners and Operators	2021-2026	Facility/ Municipal Budgets	C, H, J, L

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PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A.1.7.c	Schuyler County	Utilize community approach to comprehensive emergency management	Schuyler County Emergency Management has a goal to coordinate all stakeholders in a whole community approach to comprehensive emergency management. Ensuring that needs of critical facilities, operations, and special needs populations are addressed in vital, and requires coordination with utilities and other essential service providers.	Schuyler County Emergency Management Office	2021-2026	County Budget	B, C, D, H, I, K
A.1.7.d	Schuyler County	Encourage use of Underground utilities	Utilities prefer to utilize the most cost effective method for installing utilities, often leaning toward aboveground utilities unless required to place utilities underground.	Schuyler County Emergency Management Office	2021-2026	County Budget, EMPG	A, B, C, D, I
A.1.7.e	Schuyler County	Offer training for effective tree maintenance for highway departments	There is a need to educate local highway department workers about proper tree maintenance to help to preserve trees to the greatest extent while minimizing secondary impacts of fallen limbs, fallen trees, and associated debris which can damage power lines and other infrastructure.	Schuyler County Highway Department	2024, 2026	County Budget, Soil and Water Accessible Funds, NYSEG Grants	B, C, D, I, K
A.1.7.f	Schuyler County	Install emergency generator at the Falls Home	The Falls Home does not currently have a back up generator. Due to nature of this facility it is critical for the well-being of its residents. They currently rely on procurement and deployment of portable generator upon each occurrence of need at this facility.	Schuyler County Public Health/ Falls Home	2023-2024	Private Funds, Hazard Mitigation Funds	A, C, D, J, L
A.1.7.g	Town of Catharine	Procure and Install Emergency Generator in the Highway Garage & Town Hall	The Town of Catharine Highway Garage and Town Hall currently do not have a backup power source.	Town of Catharine Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A.1.7.h	Town of Cayuta	Procure and Install Emergency Generator in the Highway Garage	The Town of Cayuta Highway Garage does not currently have a backup power source.	Town of Cayuta Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.i	Town of Hector	Procure and Install Emergency Generator in the Highway Garage & Town Hall	The Town of Hector Highway Garage and Town Hall do not have a backup power source.	Town of Hector Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.j	Town of Montour	Procure and Install Emergency Generator in the Highway Garage & Town Hall	The Town of Montour Highway Garage and Town Hall do not have a backup power source.	Town of Montour Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.k	Town of Orange	Procure and Install Emergency Generator in Critical Facilities	The Town of Orange Highway Garage and Monterey Fire Department do not have a backup power source.	Town of Orange Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.l	Town of Reading	Procure and Install Emergency Generator in Highway Garage	The Town of Reading Highway Garage and Town Hall do not have a backup power source	Town of Reading Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.m	Town of Tyrone	Procure and Install Emergency Generator in the Highway Garage & Town Hall	The Town of Tyrone Highway Garage and Town Hall do not have a backup power source.	Town of Tyrone Highway Department	2024	Hazard Mitigation Grant, USDA Grant, Town Budget	A, C, D, J, L
A.1.7.n	Village of Montour Falls	Procure and Install Emergency Generator in the Village Hall	The Village of Montour Falls Village Hall does not have a backup power source.	Village of Montour Falls Public Works Department	2024	Hazard Mitigation Grant, USDA Grant, Village Budget	A, C, D, J, L

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A.1.7.o	Village of Odessa	Procure and Install Emergency Generator Village Water System	The pumps that operate the Village water system do not have a source of back up power.	Village of Odessa Public Works Department	2024	Hazard Mitigation Grant, USDA Grant, Village Budget	A, C, D, J, L
8.DEVELOP CONTINUITY OF GOVERNMENT PLANS							
A.1.8.a	Schuyler County	Develop Continuity of Government Plans	The County must ensure the continued operation of county government in the event of a disaster.	Schuyler County Emergency Management Office	2023	County Budget, EMPG	B, C, H, K, L
9. MAKE FIRE HYDRANTS MORE ACCESSIBLE DURING THE WINTER MONTHS							
A.1.9.a	Schuyler County	Purchase and install hydrant Markers	The majority of the fire hydrants in Schuyler County are unmarked.	Schuyler County Emergency Management Office	2021-2026	County Budget, NFA Grants	A, B, C, D, I
A.1.9.b	Schuyler County	Develop Public awareness campaign about fire hydrants Clearing	Fire Hydrants need to be cleared after snow storms, so fire departments do not have to snow and debris from fire hydrant it can which can take time.	Schuyler County Emergency Management Office	2023	County Budget, NFA Grants	A
10. CONTINUE TO COORDINATE TRAINING FOR ALL STAKEHOLDERS.							
A.1.10.a	Schuyler County	Conduct County-wide Emergency Management Training Assessment	The County needs to conduct a county-wide emergency management training needs assessment.	Schuyler County Emergency Management Office	2023	County Budget, EMPG	B
A.1.10.b	Schuyler County	Conduct County-wide Emergency Management Training	The assessment conducted in A.1.10a identified training needs of stakeholders and these trainings need to be offered.	Schuyler County Emergency Management Office	2021-2026	County Budget, EMPG	All

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
A. ALL HAZARDS							
PRIORITY 2 : 5+ YEARS - [ITEMS NEEDING FURTHER ANALYSIS DURING THE NEXT FIVE YEARS TO DETERMINE BEST COURSE OF ACTION]							
1. EMERGENCY OPERATIONS CENTER [EOC] UPGRADE							
A.2.1.a	Schuyler County	Conduct Feasibility Study for new EOC	The current EOC has significant limitations due to size, structure, and location	Schuyler County Emergency Management Office	2025+	County Budget, EMPG	B, C, D, J, L
B. FLOODING							
PRIORITY 1 : 1-5 YEARS							
1. ENCOURAGING ZONING AND LAND USE REGULATIONS IN EACH MUNICIPALITY.							
B.1.1.a	Schuyler County	Update local Land use regulations to promote safety and minimize losses	Effective zoning or land use regulations are need to ensure that future development as and improvements to existing structures are constructed in the proper location.	Schuyler County Planning Department	2021-2026	County Budget, EMPG	A, B, D, E, J
B.1.1.b	Schuyler County	Provide Training on the benefits of Zoning	Training and guidance must be provided to jurisdictions will help ensure that their zoning and land use regulations are properly created and implemented to ensure that future development as well as improvements to existing structures are constructed in the proper location.	Schuyler County Planning Department	2024, 2026	County Budget	B, D, E, J
B.1.1.c	Schuyler County	Provide Low Impact Development [LID] Training	There is a need to train local municipalities on Low Impact Development [LID]	Schuyler County Planning Department	2023, 2025	County Budget	B, D, E, J

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.1.d	Schuyler County	Incorporate Hazard mitigation into County Referable Projects	Changes to review procedures are needed to better incorporate hazard mitigation into County 239-m reviews.	Schuyler County Planning Department	2024	County Budget	B, D, E, J
B.1.1.e	Schuyler County	Explore the integration of Hazard zoning	There is a need for hazard zoning and high-risk hazard land use ordinances to be incorporated into local zoning laws.	Schuyler County Planning Department	2023	County Budget	B, D, E, J
B.1.1.f	Schuyler County	Develop Stormwater Management Plan for Flood Reduction	A comprehensive stormwater management plan is need to examine surface water and runoff patterns in every jurisdiction.	Schuyler County Planning Department	2023	County Budget	A, B, D, E, J
2. ENCOURAGING CONSISTENT CODE ENFORCEMENT IN EACH MUNICIPALITY.							
B.1.2.a	Schuyler County	Establish Stormwater Run-Off Training opportunities for Code Enforcement	Local Code Enforcement Officials need additional training on stormwater run-off to ensure that development and improvements take place safety within established standards, both those derived from national and state regulation, as well as locally enacted regulations.	Schuyler County Planning Department	2024, 2026	County Budget	B, D, E, J
B.1.2.b	Schuyler County	Consistent Code Enforcement Training	Local Code Enforcement Officials need additional training to ensure that development and improvements take place safely within established standards, both those derived from national and state regulation, as well as locally enacted regulations.	Schuyler County Planning Department	2021-2026	County Budget	B, D, E, J
3. ADDRESSING COUNTY AND LOCAL ROADWAY DRAINAGE AND STORMWATER MANAGEMENT ISSUES.							
B.1.3.a	Schuyler County	Replace & Upgrade Culverts under elevated county roads	The County must continuously address county and local roadway drainage and stormwater management issues in order to reduce the risk of deterioration of the culvert, potential collapse, and uncontrolled stormwater runoff.	Schuyler County Highway Department	2023	County Budget, Hazard Mitigation Funds, FHWA Grants	C, D, E, F, G, K

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PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.b	Schuyler County	Elevate Bridge over Vanloon Creek	Current bridge over Vanloon Creek is not high enough to adequately manage the creek running high as a result of rain/runoff. Stormwater currently undermines the road and bridge and washes over the roadway.	Schuyler County Highway Department	2024	County Budget, Hazard Mitigation Funds, FHWA Grants	C, D, E, F, G, K
B.1.3.c	Schuyler County	Replace Box Culvert under County Rd 23	A box culvert is needed across County Road 23 near Stamp Road in the Town of Reading. Currently Stamp Road, County Road 23 and a private home are being flooded on a continual basis due to several under sized cross culverts under CR 23, and the railroad	Schuyler County Highway Department	2023-2025	County and Local Budgets	C, D, E, F, G, K
B.1.3.d	Schuyler County	Replace Wooden Trestle Bridge on Cook Road	The current bridge on Cook Road is compromised and could collapse in a larger storm event. Stormwater currently undermines the road and bridge and washes over the roadway	Schuyler County Highway Department	2023-2025	County Budget, Hazard Mitigation Funds, FHWA Grants	C, D, E, F, G, K
B.1.3.e	Schuyler County	Raise County Road 18 and upsize culverts	Upsizing the cross culverts and slightly raising its elevation is needed on County Road 18 just north of Beaver Dams Moreland Road. In concert with this the County Road 18 needs to be raised in order to prevent continual flooding of the road itself. The upslope stream crosses County Road 18 and flows into a DEC wetland causing a capacity issue during high intensity storm events.	Schuyler County Highway Department	2023-2025	County and Local Budgets	B, C, D, E, F, G, K
B.1.3.f	Schuyler County	Continue Road Inspection of Ditches and continue bank stabilization Efforts	To ensure an accurate and effective flood mitigation program there must be continued assessment and identification of needs which can prevent future losses.	Schuyler County Highway Department	2021-2026	County and Local Budgets	B, C, D, E, F, G, K

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.g	Schuyler County	Establish a cache of Heavy equipment for stream Management	There is currently a very limited availability of heavy equipment in Schuyler County, resulting in delays in projects and emergency work and a higher cost over time to rent equipment, if available. Along with the higher cost over time for equipment rentals are costs associated with not addressing projects and emergency work in a timely fashion.	Schuyler County Soil and Water Conservation District	2023-2026	Hazard Mitigation Grants	C, D, E, F, G, K
B.1.3.h	Schuyler County	Realign Cayuta Creek along County Road 224	Portions of County Road 224 are currently compromised and at risk of failure do to the current flow and velocity of Cayuta Creek.	Schuyler County Soil and Water Conservation District	2023-2024	County Budget, Hazard Mitigation Grants	C, D, E, F, G, K
B.1.3.i	Schuyler County	Replace culverts along County Road 6	Cayuta Inlet is prone to repetitive damages along and between County Road 6, Chapman Road, and Cayutaville Road during flooding. Replacement of culverts is necessary to enlarge and reinforce these passages.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget , Hazard Mitigation Grants, FHWW Grants	C, D, E, F, G, K
B.1.3.j	Schuyler County	Continue County-wide Ditch Stabilization program	There is a need to continue road ditch stabilization program to prevents damage to adjacent roadways.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget	B, C, D, E, F, G
B.1.3.k	Schuyler County	Continue county-wide upsizing of cross culverts and driveway culverts	Drainage and stormwater management issues must be addressed on county and local roadways by increasing the overall size of cross culverts and driveway culverts.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G
B.1.3.l	Schuyler County	Implementation of retention ponds in upper sub Reaches of flood prone watersheds	High intensity short duration storm events result in significant flooding that must be contained and slowed prior to reaching flood prone areas.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget, Hazard Mitigation Grants	B, C, D, E, F, G

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.m	Schuyler County	Continue county-wide Stream Stabilization Program	There is a need to continue the stream stabilization program for maintaining and repairing damage to streambanks throughout the county	Schuyler County Soil and Water Conservation District	2021-2026	County Budget, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G
B.1.3.n	Schuyler County	Continue county-wide Stream Inspection Program	There is a need to continue stream inspections and assessments county-wide to identify segments with erosion, debris, or other problematic conditions	Schuyler County Soil and Water Conservation District	2021-2026	County Budget, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G
B.1.3.o	Town of Catharine	The culvert under Pertl Road can not sufficiently accommodate storm water during flooding events.	Replace and upgrade 5' steel culvert with box culvert under Pertl Road in the Town of Catharine	Town of Catharine Highway Department	2023-2025	Private Funds, Hazard Mitigation Funds	C, D, E, F, G, K
B.1.3.p	Town of Cayuta	Replace and Upgrade Culvert #56 on Varney Road	Culvert #56 on Varney Hill Road has failed and continually leads to flooding across the road.	Town of Cayuta Highway Department	2023 - 2025	Hazard Mitigation Grant, USDA Grant, Town Budget	C, D, E, F, G, K
B.1.3.q	Town of Dix	Culvert Upgrade and Replacement on Whites Hollow Road	Whites Hollow Road in the State Park needs to be raised to allow for new culverts to be established and to give a proper grade so the existing draining system has a place to drain. Currently the drainage ditches and cross culverts have no place to drain. Many of the culverts have no outlets at all. Any significant storm event is causing flooding of the road system and sedimentation to the gorge itself. Stabilization of the streambank on the north west bank above the bridge is also necessary to protect the road.	Town of Dix Highway Department	2023 - 2025	County and Local Budgets	C, D, E, F, G, K

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.r	Town of Dix	Culvert Upgrade and Replacement on Station Road	The cross culvert on Station Road just east of Whites Hollow Road is undersized and the outlet has a near 20 foot vertical erosion that directly discharges to the state park.	Town of Dix Highway Department	2023 - 2025	County and Local Budgets	C, D, E, F, G, K
B.1.3.s	Town of Dix	Purchase Excavator for ditch maintenance	Current excavator equipment is in disrepair and will soon end its useful service.	Town of Dix Highway Department	2024	County and Local Budgets	C, D, E, F, G, K
B.1.3.t	Town of Hector	Replace and Upgrade culverts along County Road 6	The steel culvert at Hickey Road is failing and not large enough to accommodate stormwater runoff during large storm events.	Town of Hector Highway Department	2023 - 2025	Hazard Mitigation Grants, FHwy Grants	C, D, E, F, G, K
B.1.3.u	Town of Montour	Replace & Upgrade Box Culvert Winton Road	The box culvert across Winton Road needs to be replaced. The wing walls are showing deterioration and the concrete guide rails are failing.	Town of Montour Highway Department	2023 - 2025	Local Budgets	C, D, E, F, G, K
B.1.3.v	Town of Orange	Replace & Upgrade Culvert at Switzer Hill Road	The culvert has collapsed and the road could collapse in another large storm event.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget, Hazard Mitigation Grants	C, D, E, F, G, K
B.1.3.w	Town of Orange	Stream stabilization along Switzer Hill Road	There is need for stream stabilization and installation of flood attenuation wetland along Switzer Hill Road near County Road 16 in the Town of Orange.	Schuyler County Soil and Water Conservation District	2023-2025	County Budget , Hazard Mitigation Grants, FHwy Grants	C, D, E, F, G, K

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.x	Town of Orange	Replace & Upgrade Culvert #128 at Coon Hollow RD	The culvert has significantly deteriorating and the road could collapse in another large storm event.	Town of Orange Highway Department	2023-2025	Hazard Mitigation Grant, USDA Grant, Town Budget	C, D, E, F, G, K
B.1.3.y	Town of Reading	Install diversion Ditch County Rd 23	There is a need for a diversion ditch off County Road 23 where it causes surface flooding, damaging roads and structures.	Town of Reading Highway Department	2024-2026	Hazard Mitigation Grant, County and Town Budgets	C, D, E, F, G, K
B.1.3.z	Town of Tyrone	Identify Projects to minimize Flooding losses at crossing of Tobehanna Creek	The branches of Tobehanna Creek often pose flash flooding issues, particularly at road crossings, which are a combination of state, county, and local roads.	Town of Tyrone Highway Department	2023	Local Budget	C, D, E, F, G, K
B.1.3.aa	Village of Burdett	Address flooding at Factory and Mill Streets	During large storm event there is constant flooding at the intersection of Factory St and Mill St.	Schuyler County Soil and Water Conservation District	2024-2026	Village Budget, Hazard Mitigation Grants	C, D, E, F, G, K
B.1.3.bb	Village of Burdett	Address flooding behind Fire Department	The area behind the Fire Department experiences significant flooding and it beginning to undermine the parking lot associated with the Fire Department impacting first response capabilities.	Schuyler County Soil and Water Conservation District	2024-2026	Village and Town Budgets, Hazard Mitigation Grants	C, D, E, F, G, K

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.cc	Village of Montour Falls	Owego Street Flooding Mitigation	Owego Street is a primary residential street located on the west side of the Village. The street generally runs northwest to southeast and contains approximately 51 residences. It is estimated the current street design was constructed in the 1950's and has been said that the street was once the primary arterial road through the Village until the construction of NYS Rte. 14. The street has only seen occasional maintenance/repairs as needed through the years. A noticeable trait, unique to Owego Street [the section from W. South Street to Mary Layton Dr.], is that it was constructed with concrete gutters in lieu of traditional curbing. The gutters are ineffective at removing stormwater and are often clogged. This leads to localized flooding often.	Village of Montour Falls Public Works Department	2023-2025	Local Budget, Hazard Mitigation Funds, FEMA Grants	C, D, E, F, G, K
B.1.3.dd	Village of Montour Falls	Village Wide Stormwater infrastructure improvement	The stormwater infrastructure in the village is deteriorating and need to be upgraded/replaced.	Village of Montour Falls Public Works Department	2023 -2025	Local Budget, Hazard Mitigation Funds, FEMA Grants	C, D, E, F, G, K
B.1.3.ee	Village of Odessa	Mill Creek Stabilization	Mill Creek needs to be cleared and needs ditch stabilization to reduce flooding of adjacent parcels.	Village of Odessa Public Works Department	2023 -2025	Local Budget, Hazard Mitigation Funds, FEMA Grants	B, C, D, E, F, G

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B.1.3.ff	Village of Watkins Glen	Replace concrete walls at Glen Creek	The concrete walls presently lining Glen Creek within the Village are greatly deteriorated. Further aging of the walls will result in collapse and subsistence of the earth behind the walls into the creek, resulting in damage to the surrounding area and heightening the flood hazard by decreasing the depth of the channel.	Watkins Glen Public Works Department	2023-2025	Hazard Mitigation Grants, CDBG	C, D, E, F, G, K
B.1.3.gg	Village of Watkins Glen	Culvert Replacement and Stream Stabilization on Bath Street	The stream along Bath Street is causing a potential catastrophic road failure on Bath Street due to stream erosion and a cross culvert outlet erosion	Watkins Glen Streets Department	2025-2026	Village Budget, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G
B.1.3.hh	Village of Watkins Glen	Study Flood Control Structures in Glen Creek	The sediment has increased to a point that they lack significant flood control or retention capacity within the flood control structures in Glen Creek	Watkins Glen Streets Department	2023-2025	Village and Town Budgets, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G
B.1.3.ii	Village of Watkins Glen	Culvert Replacement and Stream Stabilization at Summit Ave & Howard St	During past flash flooding events the banks of the tributary of Seneca Lake and associated culverts where the creek passes under Summit Avenue and Howard Street have experienced significant failures that has resulted in flood damage to adjacent homes and roadways.	Watkins Glen Streets Department	2024 -2026	Village and Town Budgets, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, E, F, G

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
4. COUNTY-WIDE LIDAR UPDATE							
B.1.4.a	Schuyler County	Update Floodplain Maps	FIRMs for Schuyler County are severely outdated, making them of limited utility. LIDAR topographic scans utilize current technology to provide high-accuracy elevation data.	Schuyler County Planning Department	2024-2025	Hazard Mitigation Grants	B, C, D, E, F, G, H, J, K
5. INSTALL REAL-TIME WATER LEVEL MONITORING GAUGE							
B.1.5.a	Schuyler County	Install real-time water level monitoring gauge on Catharine Creek	There is no real-time water level monitoring gauge on Catharine Creek in Montour Falls.	Schuyler County Emergency Management Office	2023	County Budget, Hazard Mitigation Grants	H
6. MAINTAIN NWS STORM READY DESIGNATION							
B.1.6.a	Schuyler County	Maintain NWS Storm Ready Designation	There are requirements to maintain NWS Storm Ready designation.	Schuyler County Emergency Management Office	2021-2026	County Budget	A, B, H
7. INCREASE RESILIENCY OF CRITICAL FACILITIES AND INFRASTRUCTURE							
B.1.7.a	Village of Montour Falls	Increase Flood Protection at Village Well Site	There is currently inadequate flood Protection at Village Well Site	Village of Montour Falls Public Works Department	2023-2026	Hazard Mitigation Grants, USDA Grant, Village Budget	A, C, D, J, L
B.1.7.b	Village of Montour Falls	Levee Recertification	The levee system in Montour Falls will need to be reaccruited in order to maintain FEMA recognition as meeting compliance at reducing flooding risks	Village of Montour Falls Public Works Department	2023-2025	Hazard Mitigation Grants, FEMA Grants	B, C, D, E, I, J, L

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
B. FLOODING							
PRIORITY 2 : 5+ YEARS - [ITEMS NEEDING FURTHER ANALYSIS DURING THE NEXT FIVE YEARS TO DETERMINE BEST COURSE OF ACTION]							
1. DEVELOP STRATEGY TO IMPROVE HIGH-HAZARD DAMS							
B.2.1.a	Schuyler County	Develop Strategy to Improve High-Hazard Dams	Several privately owned dams in Schuyler County have been rated by NYS DEC as high-hazard. A course of action must be determined for each dam.	Schuyler County Emergency Management Office	2021-2026	County Budget	B, C, D, E, F, G, I, K
2. REPLACE CONCRETE WALLS AT GLEN CREEK							
B.2.2.a	Village of Watkins Glen	Address deteriorating Breakwaters	Breakwaters near the southern end of Seneca Lake aid in protecting the shoreline from wave action and erosion. The breakwaters are decades old and have deteriorated significantly and are in need of significant repair to maintain their effectiveness.	Watkins Glen Public Works Department	2024	Village Budget, Hazard Mitigation Grants, other State and Federal Sources	B, C, D, F, G
3. IDENTIFY PROPERTIES WITH HIGHER RISK OF FLOODING							
B.2.3.a	Schuyler County	Identify properties with higher risk of Flooding	Throughout the County there are properties at higher risk of flooding or other hazards which may be eligible for mitigation programs, but there is not a single source for identifying these properties and their owners.	Schuyler County Emergency Management Office	2021-2026	County Budget	B, C, D, J
4.FLOOD MITIGATION - HUMAN SERVICES COMPLEX							
B.2.4.a	Schuyler County	Flood mitigation - Human Services Complex	The Schuyler County Human Services complex is within the FIRM Zone B, indicating a 500 year flood area. The Schuyler County Human Services complex has an elevated risk of flooding due to its location relative to Catharine Creek. Principal agencies must convene to determine possible courses of action to protect the building from flooding, minimizing damage to this critical infrastructure.	Schuyler County Department of Buildings and Grounds	2021-2026	County Budget	C, D, L

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
C. CYBER ATTACK							
PRIORITY 1 : 1-5 YEARS							
1. REVIEW AND UPDATE COUNTY CYBER SECURITY POLICIES.							
C.1.1.a	Schuyler County	Review and Update Cybersecurity Policies	Policies and practices relative to cybersecurity and the county's IT infrastructure must regularly be reviewed to ensure that industry standards are met to protect against multiple forms of cyberattack.	Schuyler County Information Technology Department	2021-2026	County Budget	B, C
2. UPGRADE APPLICATIONS IN COMPLIANCE WITH POLICIES AND PRACTICES							
C.1.2.a	Schuyler County	Upgrade Applications to comply with Cybersecurity Policies and practices	Several applications in use have a greater susceptibility to cyberattack and must be replaced to mitigate against this hazard.	Schuyler County Information Technology Department	2021-2026	County Budget	B, C
D. HAZMAT RELEASE - IN TRANSIT							
PRIORITY 1 : 1-5 YEARS							
1. INCREASE AWARENESS OF PIPELINE HAZARDS.							
D.1.1.a	Schuyler County	Maintain an active Hazard Mitigation program	Local responders need to increase their knowledge and skills for responding to pipeline emergencies.	Schuyler County Emergency Management Office	2023	County Budget	B, I
D.1.1.b	Schuyler County	Promote 811 Program	There is a need for increased awareness among public works personnel, private contractors, and property owners of the caution necessary to prevent damage to underground pipelines and the need to utilize 811 [Call Before You Dig]	Schuyler County Emergency Management Office	2021-2026	County Budget	A, B, I
D.1.1.c	Schuyler County	Increase awareness Pipeline hazards	The identification of underground pipeline areas are not currently incorporated into local land use regulations	Schuyler County Planning Department	2021-2026	County Budget	All

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TABLE 25: Mitigation Action Plan

PROJECT NUMBER	JURISDICTION	PROJECT NAME	MITIGATION ACTION	LEAD AGENCY	TIMELINE	FUNDING	ASSOCIATED GOALS
2. INCREASE AWARENESS OF FREIGHT RAIL HAZARDS.							
D.1.2.a	Schuyler County	Coordinate Training for Rail Incidents	Local responders need to increase their knowledge and skills for responding to rail emergencies	Schuyler County Emergency Management Office	2021-2026	County Budget	B, C, K
3. INCREASE AWARENESS OF AND PREVENT AGAINST HIGHWAY EMERGENCY INCIDENTS.							
D.1.3.a	Schuyler County	Coordinate training for highway emergencies	Local responders need to increase their knowledge and skills for safely responding to highway emergencies	Schuyler County Emergency Management Office	2024, 2026	County Budget	B, C, K
D.1.3.b	Schuyler County	Increase enforcement of Vehicle and traffic Laws	Vehicle and Traffic laws need to be continuously and consistently enforced in order to protect the public and prevent highway emergency incidents, protecting lives and property.	Schuyler County Sheriff's Department	2021-2026	Agency Operating Budgets	A, B, C, K
E. ACTIVE SHOOTER							
PRIORITY 1 : 1-5 YEARS							
1. PREPARE FOR ACTIVE SHOOTER RESPONSE							
E.1.1.a	Schuyler County	Develop Active Shooter Response Plan, Protocols and Training	Local responders need to remain current and proficient with response standards and protocols. There is a need to prepare for active shooter responses	Schuyler County Sheriff's Department	2021-2026	County Budget	B, C
F. PANDEMIC							
PRIORITY 1 : 1-5 YEARS							
1. ENHANCE POINT OF DISTRIBUTION [POD] CAPABILITY							
F.1.1.a	Schuyler County	Enhance County POD Capabilities	There is a need for additional Medical Reserve Corps [MRC] volunteers help supplement and support public health efforts for large events, such as PODs.	Schuyler County Public Health Department	2023	County Budget	A, B, L

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan. Hazard Mitigation Action Worksheets are organized by primary jurisdiction/agency for easy reference. It should be noted that many jurisdictions and agencies may find themselves listed as a coordinating jurisdiction/agency. Following the Hazard Mitigation Action Worksheets is a summary table identifying each hazard mitigation action by hazard.

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: HAZARD VULNERABILITY CHECKLIST			
Project Number	A.1.1.a		
Hazard Mitigation Planning Goal[s]	A, D, F, H, I		
Project Category [POETE]	Planning, Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Compile hazard vulnerability checklists for local residents and businesses, with information on preparing home emergency kits. Post information on the county website, create handouts for various applications, and post information in libraries and other community centers.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - - Better prepared residents and businesses help to minimize impacts and losses, and decrease the potential burden on first responders.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Other County Agencies		
Prioritization	Priority 1	Desired Timeframe for Implementation	Spring 2023
Estimated Time Required for Project Implementation	6 months	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop Materials Only, Promote only on social media	< \$50,000	Not Recommended
	Conduct outreach trainings to citizens and businesses at public locations	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: PROVIDE SPECIFIC PREPAREDNESS INFORMATION FOR TOURIST & VISITORS			
Project Number	A.1.1.b		
Hazard Mitigation Planning Goal[s]	A, H		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need to increase awareness of tourists of hazards that could impact them and how they prepare for them.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Compile specific preparedness information for tourists and visitors. Post information on the county and partner websites. Create and provide handouts and provide to local tourist destinations. Promote information via social media and at public gathering locations. Like other proven awareness campaigns, it is expected that some visitors and tourists will use the information provided to become better prepared. By being better prepared, they know what to expect and what to do in an area they may not be fully familiar with. This helps to minimize impacts and losses, and decrease the potential burden on first responders. Simple measures can save lives and property. This is a reasonably effective means of promoting hazard awareness to visitors and tourists.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Minimize impacts and losses, and decrease the potential burden on first responders. Simple measures can save lives and property.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Health Department, Sheriff's Office, Watkins Glen International Speedway; Local Wineries, Tourism Booths, and other Visitor Areas		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023, ongoing
Estimated Time Required for Project Implementation	6 months	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop Materials and only promote on social media and public gathering locations	< \$50,000	Not Recommended
	Conduct outreach trainings to citizens and businesses	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUE PARTICIPATION IN STATE AND FEDERAL HAZARD AWARENESS CAMPAIGNS			
Project Number	A.1.1.c		
Hazard Mitigation Planning Goal[s]	A, B, D, F, H, I, L		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	A need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue participation in state and federal hazard awareness campaigns such as 'severe weather week', 'winter weather awareness week', and 'Turn Around Don't Drown'. Post information on the county website, create handouts for a variety of applications, and post information in libraries and other community centers. Promote information via social media and at public gathering locations. This compliments A.1.1.a and potentially A.1.1.b by leveraging information already available from state and federal agencies.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Better prepared residents and businesses help to minimize impacts and losses, and decrease the potential burden on first responders.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	NYS DHSES, FEMA, County Agencies		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023, ongoing
Estimated Time Required for Project Implementation	On-going	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue participation in State and Federal Hazard Awareness Campaigns.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INCREASE USE AND AWARENESS OF EMERGENCY WARNING AND INFORMATION METHODOLOGIES.			
Project Number	A.1.1.d		
Hazard Mitigation Planning Goal[s]	A, B, D, F, H, I, L		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Ensuring that the public has awareness of free or low cost emergency alert and notification systems helps to ensure that they receive life-saving information when they need it.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Better-prepared residents and businesses help to minimize impacts and losses and decrease the potential burden on first responders. Simple measures can save lives and property. Continue to encourage the utilization of NY Alert and NOAA Weather Radios by residents, businesses, and institutions to improve the dissemination of emergency warnings and information. Post information on the county and partner websites, create handouts for various applications and post information in libraries and other community centers. Promote information via social media and at public gathering locations.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Continue increasing awareness of residents and businesses of emergency warning and information methodologies.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	NYS DHSES, County agencies, local governments, Environmental Emergency Service		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023, ongoing
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue to encourage utilization of NY Alert and NOAA Weather Radios by residents, businesses, and institutions	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP ADDITIONAL PUBLIC INFORMATION CAMPAIGNS			
Project Number	A.1.1.e		
Hazard Mitigation Planning Goal[s]	A, B, D, H, L		
Project Category [POETE]	Planning, Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need to increase awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them. There is a need for additional public information campaigns to address certain hazards that either currently exist or may emerge in the future.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Better-prepared residents and businesses help to minimize impacts and losses and decrease the potential burden on first responders. Simple measures can save lives and property. To address this problem, coordinate with stakeholders to identify other public information campaigns for various facets of emergency preparedness, hazard mitigation, and emergency services for residents and businesses. Develop campaigns and formulate an implementation schedule.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Departments, Fire Departments, EMS, Law Enforcement		
Prioritization	Priority 1	Desired Timeframe for Implementation	Spring 2023, ongoing
Estimated Time Required for Project Implementation	6-8 months	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Commission a third party needs assessment	> \$100,000	Not Recommended
	Implement identified emergency preparedness campaigns	< \$50,000 Project planning and development and printing of materials.	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP EDUCATIONAL INFORMATION ABOUT SAFE TREE MAINTENANCE			
Project Number	A.1.1.f		
Hazard Mitigation Planning Goal[s]	A, B, D, I		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	Severe Wind/ Tornados, Flooding		
Description of Problem	There is a need to increase awareness by residents and businesses of the need to maintain trees to minimize hazards		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Create and disseminate educational information about safe maintenance of trees adjacent to homes and other structures. Recommend trees suitable for urban landscaping. This is a reasonably effective means of promoting hazard awareness and safe applications to residents and businesses. Like other proven awareness campaigns, it is expected that some residents and businesses will use the information provided to prevent potential damages to their homes and other structures. Better prepared residents and businesses help to minimize impacts and losses, and decrease the potential burden on first responders. Simple measures can save lives and property.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - A increased awareness by residents and businesses of the need to maintain trees to minimize hazards
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	Soil and Water Conservation Funding Streams
Local Planning Mechanisms to be Used in Implementation	Potential for encouraging zoning regulations which require standoff distances for newly planted trees		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Conduct outreach trainings to citizens and businesses.	\$50,000 - \$99,999	Not Recommended - The time and cost associated with this is prohibitive.
	Create and disseminate educational information about safe maintenance of trees adjacent to homes and other structures	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: MAINTAIN AN ACTIVE HAZARD MITIGATION PROGRAM			
Project Number	A.1.2.a		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The county works to maintain a proactive and meaningful county-wide all-hazard mitigation plan, and must regularly as a committee to identify any changes in hazard data, at-risk critical facilities, and potential mitigation techniques.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Regularly convene as a committee to keep astride of changes as they occur will allow the county and jurisdictions to better identify concerns and new priorities as needed, preventing a variety of losses. This approach will also allow us to be better prepared for the next hazard mitigation plan update.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Allow the County to be better prepared for the next hazard mitigation plan update.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Hazard Mitigation Committee, Invite other stakeholders as necessary		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	Periodic review of county and jurisdiction comprehensive plans, zoning, and land use policies		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a consultant to monitor changes in hazard data, at-risk critical facilities, and potential mitigation techniques.	> \$100,000	Not Recommended - Too costly and impractical.
	Convene regularly as a committee to identify any changes in hazard data, at-risk critical facilities	\$0	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUOUS REVIEW/REVISION OF RISK ASSESSMENT			
Project Number	A.1.2.b		
Hazard Mitigation Planning Goal[s]	B		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	To maintain a proactive and meaningful county-wide all-hazard mitigation plan new data needs to continuously be reviewed and the risk assessment needs to be revised.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Convene regularly as a committee to review and revise risk assessments based upon new data identified in A.1.2.a. Invite other stakeholders as necessary. Keeping astride of changes as they occur will allow the county and jurisdictions to better assess new information and review risk assessments with a goal of maintaining an active hazard mitigation program, preventing a variety of losses. This approach will also allow us to be better prepared for the next hazard mitigation plan update.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness by residents and businesses of hazards that could impact them and how they can mitigate and prepare for them.
Useful Life	5-15 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Hazard Mitigation Committee		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - Ongoing
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a consultant to update risk assessment based upon new hazard data form A.1.2.a	> \$100,000	Not Recommended
	Implement identify needed emergency preparedness campaigns	< \$50,000	Recommended Alternative - Cost include Project planning and development and printing of materials.
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: LOCALLY ADOPT THE SCHUYLER COUNTY MULTI-JURISDICTION ALL-HAZARD MITIGATION PLAN			
Project Number	A.1.3.a		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Each town and village must locally adopt the Schuyler County Multi-Jurisdiction All-Hazard Mitigation Plan.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Each town and village formally adopts the Hazard Mitigation Plan.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Formal plan adoption by each town and village is an important first step in implementing the hazard mitigation plan throughout the county.
Useful Life	5 years		
Estimated Cost	\$0		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County, All Town and Village Governments		
Coordinating Agencies	Schuyler County Hazard Mitigation Committee; Local Planning, Zoning, Highway/Public Works, Fire Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - to begin after county approval
Estimated Time Required for Project Implementation	1 year	Project Funding Sources	No cost associated with adoption.
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Adoption of the Hazard Mitigation Plan	\$0	Recommended Alternative
	<i>A third alternative was not considered due to the importance of each municipality adopting the plan.</i>		
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INTEGRATE HAZARD MITIGATION ISSUES INTO COUNTY LAND USE REGULATIONS			
Project Number	A.1.3.b		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Many hazard mitigation measures are implemented through planning and regulatory activities. Hazard mitigation issues in the adoption of policies and land use regulations must be considered in order for implementation with lasting effect.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	County and local planning officials shall coordinate in the review of hazard mitigation issues when adopting county and local policies and land use regulations.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Integrate hazard mitigation into county and local decision-making. A wide range of life and property losses are avoided through the implementation of these programs.
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County and Local Departments and Boards		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate in the review of hazard mitigation issues when adopting county and local policies and land use regulations.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: IDENTIFICATION OF OTHER EMERGENCY MANAGEMENT PLANNING NEEDS			
Project Number	A.1.4.a		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	As Schuyler County continues to maintain a professional comprehensive emergency management program, a periodic assessment of needs must be conducted to ensure that all needs are being met. Identification of other emergency management planning needs to be compiled to maintain a proactive comprehensive emergency management program.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	The Emergency Management Office has a variety of committees and stakeholders available, such as the hazard mitigation committee and LEPC, to aid in the identification of additional emergency management planning needs.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - A wide range of life and property losses are avoided through deliberate planning efforts.
Useful Life	5-15 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Departments, LEPC, and Other Stakeholders		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a consultant to conduct a needs assessment to identify emergency management planning needs.	> \$100,000	Not Recommended - Too costly and impractical.
	Regularly convene stakeholders to identify additional emergency management planning needs.	\$0	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: UPDATE COUNTY MASS CARE AND SHELTERING PLAN			
Project Number	A.1.4.b		
Hazard Mitigation Planning Goal[s]	B, C, K, L		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The county needs to update its comprehensive mass care and sheltering plan.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conduct a planning process to update the county mass care and sheltering plan, incorporating new information from the CEPA, this hazard mitigation plan, and other sources. The creation of one up to date plan will better address issues and provide improved direction and guidance to implementing agencies. Mass care directly impacts the lives and well-being of individuals impacted by disaster.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Address other emergency management planning needs to maintain a proactive comprehensive emergency management program.
Useful Life	5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Public Health and Social Services Agencies, American Red Cross		
Prioritization:	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be used in Implementation	Zoning Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a consultant to update the county mass care and sheltering plan.	> \$100,000 - Too costly and impractical given the scope of work	Not Recommended
	Leverage internal resources to update the county mass care and sheltering plan.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP A MULTI-YEAR TRAINING AND EXERCISE PLAN			
Project Number	A.1.5.a		
Hazard Mitigation Planning Goal[s]	B		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Develop a multi-year training and exercise plan helps to identify core capabilities to be evaluated through exercises as well as training opportunities to support those capabilities.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Develop a multi-year training and exercise plan by evaluating plans and capabilities to identify an appropriate course of action.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Improving preparedness has direct implications to the preservation of life, safety, and property in the event of a disaster.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Agencies and LEPC		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Identify core capabilities without developing exercise and training plan	< \$50,000	Not Recommended
	Develop a multi-year training and exercise plan	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DESIGN, CONDUCT AND EVALUATE EXERCISES			
Project Number	A.1.5.b		
Hazard Mitigation Planning Goal[s]	B, C, G, H, K, L		
Project Category [POETE]	Exercising		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Existing plans must be exercised in order to validate them.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Design, conduct, and evaluate exercises as identified in A.1.5.a. Exercises will provide opportunities for stakeholders to practice skills and other applications. The evaluation of plans will help to identify strengths and areas for improvement of planning, organizations, equipment, and training. Exercises will likely involve a range of effort and contribution internal to Schuyler County, the inclusion of state agencies and state assistance, perhaps federal assistance, or the use of consultants. Implementations will be better identified at the conclusion of A.1.5.a.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Improving preparedness has direct implications to the preservation of life, safety, and property in the event of a disaster.
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Social Services Agencies, American Red Cross		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds, Other Potential Funding Sources
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Regularly design, conduct, and evaluate exercises as identified in A.1.5.a	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: MAKE CORRECTIVE ACTION TO EXISTING PLANS BASED ON EXERCISES			
Project Number	A.1.5.c		
Hazard Mitigation Planning Goal[s]	B		
Project Category [POETE]	All		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Take corrective action and revise plans based on areas of improvement identified during exercises for all preparedness aspects, including plans, organizations, equipment, and training		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Based upon the after action reports and corrective action plans derived as a result of the exercises conducted from A.1.5.b, implement improvements to plans, organizations, equipment, and training, and exercises to improve the preparedness of Schuyler County.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Improving preparedness has direct implications to the preservation of life, safety, and property in the event of a disaster.
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County and Local Agencies		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG, Health Preparedness Funds, Other Potential Funding Sources
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Implement improvements to plans, organizations, equipment, and training, and exercises to improve the preparedness of Schuyler County.	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CREATE AND DEPLOY CACHES OF SIGNS AND BARRICADES			
Project Number	A.1.6.a		
Hazard Mitigation Planning Goal[s]	A, B, G, H, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need to support local capabilities to address traffic issues during an incident		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	The County Highway Department will create and deploy caches of signs and barricades for use by local highway and fire departments for emergency road closures and detours. This will also alleviate county highway assets of this role, allowing them to focus on other priorities.		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	Medium - Jurisdictions will have direct access and control over these caches, resulting in ensured availability and rapid deployment when needed.
Useful Life	10+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Local Highway and Fire Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Funds
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Leave local jurisdictions to purchase their own supplies. Many jurisdictions don't have the budgets for the purchase of supplies they do not use on a regular basis.	\$50,000 - \$99,999	Not Recommended
	Create and deploy caches of signs and barricades for use by local highway and fire departments	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: EVALUATE CRITICAL FACILITIES AND INFRASTRUCTURE - ESSENTIAL SERVICES			
Project Number	A.1.7.a		
Hazard Mitigation Planning Goal[s]	B, C, D, E, I, J, L		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Critical Facilities		
Description of Problem	Critical facilities and operations across all of Schuyler County are of a significant age, range of repair, in need of maintenance, and vulnerable to hazards. Many of these are not regularly assessed or have this information provided to the emergency management office for awareness. Evaluative points include structural integrity, vulnerability to hazard events, consequences of loss of utilities, identification of key safety zones, and needed mitigation efforts.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	All facility owners and operators should periodically evaluate the ability of each critical facility serving the county or local populations for their resilience to provide essential services in the event of a utility or other failure. Information should be reported to the County Emergency Management Office for awareness, preparedness, and potential future mitigation actions. Inclusion of the states of these facilities into preparedness and mitigation efforts can increase resilience, decrease vulnerability, and help ensure that these facilities are able to continue operations.		
Is this Project Related to a Critical Facility	Yes	X	No
Level of Protection	N/A	Estimated Benefits	High - Increase resiliency of critical facilities and infrastructure.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	All County, Town and Village Critical Facility Owners and Operators		
Coordinating Agencies	County Emergency Management Office, Other Relevant Stakeholders		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	Facility/Municipal Budgets
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Evaluation of critical facilities by facility owner	< \$50,000	Recommended Alternative
	<i>A third alternative was not considered due to the importance of ensuring critical facilities remain resilient to provide essential services in the event of a utility or other failure.</i>		
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: EVALUATE CRITICAL FACILITIES AND INFRASTRUCTURE - EMERGENCY OPERATIONS			
Project Number	A.1.7.b		
Hazard Mitigation Planning Goal[s]	C, H, J, L		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Critical Facilities		
Description of Problem	All facility owners and operators need to periodically test emergency operations equipment to ensure functionality and availability. The functionality and availability of emergency operations equipment, such as fire detection and suppression systems, water alarms, CO alarms, security systems, and others, should be evaluated to ensure the continued function and viability of critical facilities.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Information should be reported to the County Emergency Management Office for awareness, preparedness, and potential future mitigation actions. Inclusion of the status of these facilities into preparedness and mitigation efforts can increase resilience, decrease vulnerability, and help ensure that these facilities are able to continue operations.		
Is this Project Related to a Critical Facility	Yes	X	No
Level of Protection	N/A	Estimated Benefits	High - Increase resiliency of critical facilities and infrastructure.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	All County, Town and Village Critical Facility Owners and Operators		
Coordinating Agencies	County Emergency Management Office, Other Relevant Stakeholders		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	Facility/Municipal Budgets
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Test emergency operations equipment to ensure functionality and availability	< \$50,000	Recommended Alternative
	<i>A third alternative was not considered due to the importance of increasing resiliency, decreasing vulnerability, and help ensure that these facilities are able to continue operations.</i>		
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: UTILIZE COMMUNITY APPROACH TO COMPREHENSIVE EMERGENCY MANAGEMENT			
Project Number	A.1.7.c		
Hazard Mitigation Planning Goal[s]	B, C, D, H, I, K		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All, Increase resiliency of critical facilities and infrastructure		
Description of Problem	Schuyler County Emergency Management has a goal to coordinate all stakeholders in a whole community approach to comprehensive emergency management. Ensuring that needs of critical facilities, operations, and special needs populations are addressed in vital, and requires coordination with utilities and other essential service providers.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Meet annually with NYSEG and other utilities and relevant organizations to review vulnerabilities, response procedures, priorities for utility restoration to support critical facilities, and tree maintenance along utility lines.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - These coordinated efforts help ensure consistent delivery of services across the county, preserving life and property in all hazards
Useful Life	5+ years		
Estimated Cost	\$0		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	NYSEG and Other Relevant Organizations		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be used in Implementation	Review of Local Zoning Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Annually Meet with NYSEG and other utility providers	\$0	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: ENCOURAGE USE OF UNDERGROUND UTILITIES			
Project Number	A.1.7.d		
Hazard Mitigation Planning Goal[s]	A, B, C, D, I		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All, Increase resiliency of critical facilities and infrastructure		
Description of Problem	Utilities prefer to utilize the most cost effective method for installing utilities, often leaning toward aboveground utilities unless required to place utilities underground.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Underground utilities, while generally more expensive to install, are generally less prone to be impacted by hazards, thus enhancing the resiliency of critical infrastructure and minimizing impacts to residents, businesses, industry, and government. County Emergency Management will coordinate with utilities, the county planning board, and local planning boards to encourage the use of underground utilities in new developments where feasible.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - A wide range of life and property losses are avoided through deliberate planning efforts.
Useful Life	25+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Utilities, County Planning Board, Local Planning Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	County and Local Comprehensive Plans		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Encourage the use of underground utilities whenever possible	\$0	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: OFFER TRAINING FOR EFFECTIVE TREE MAINTENANCE FOR HIGHWAY DEPARTMENTS			
Project Number	A.1.7.e		
Hazard Mitigation Planning Goal[s]	B, C, D, I, K		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All, Severe Winds/ Tornadoes, Flooding		
Description of Problem	There is a need to educate local highway department workers about proper tree maintenance to help to preserve trees to the greatest extent while minimizing secondary impacts of fallen limbs, fallen trees, and associated debris which can damage power lines and other infrastructure.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Offer workshops for municipal highway personnel and others about effective tree maintenance, including selective removal of weaker species, pruning techniques that do not damage the health of the tree, etc. Tree maintenance is generally inexpensive and can prevent costly and time consuming damages and their cascading impacts.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Tree maintenance is generally inexpensive and can prevent costly and time consuming damages and their cascading impacts.
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, NYSEGs		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024, 2026
Estimated Time Required for Project Implementation	Biennial trainings	Project Funding Sources	County Budget, Soil and Water Accessible Funds, NYSEG Grants
Local Planning Mechanisms to be Used in Implementation	Supporting standoffs for newly planted trees in local regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Offer workshops for municipal highway personnel and others about effective tree maintenance,	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INSTALL EMERGENCY GENERATOR AT THE FALLS HOME			
Project Number	A.1.7.f		
Hazard Mitigation Planning Goal[s]	A, C, D, J, L		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The Falls Home does not currently have a back up generator. Due to nature of this facility it is critical for the well-being of its residents. They currently rely on procurement and deployment of portable generator upon each occurrence of need at this facility.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Procure and install a permanent emergency generator for the Falls Home.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed at the Falls Home will greatly improve the resiliency of the facility and their ability to maintain comfort and care for their residents.
Useful Life	15+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Public Health/ Falls Home		
Coordinating Agencies	Schuyler County Emergency Management		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2024
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Private Funds, Hazard Mitigation Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Evacuation and relocation of residents in the event of a sustained power outage.	\$50,000 - \$99,999	Not Recommended not a practical solution. It impacts the health and well-being of residents as well as draws significantly on county and local resources.
	Procure and install a permanent emergency generator	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP CONTINUITY OF GOVERNMENT PLANS			
Project Number	A.1.8.a		
Hazard Mitigation Planning Goal[s]	B, C, H, K, L		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The County must ensure the continued operation of county government in the event of a disaster		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	County Emergency Management will facilitate the planning process to develop a continuity of government [COG] plan for Schuyler County.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Minimizing disruption to essential functions of government in the event of a disaster.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Agencies		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Review Annually	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a Consultant to develop a COG plan	> \$100,000	Not Recommended
	Utilize County Resources and Department Heads to develop the plan	< \$50,000 - County staffing overhead	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: PURCHASE AND INSTALL HYDRANT MARKERS			
Project Number	A.1.9.a		
Hazard Mitigation Planning Goal[s]	A, B, C, D, I		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The majority of the fire hydrants in Schuyler County are unmarked.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Marked hydrants are easier for fire department personnel to locate under all conditions, including winter months when they may be buried in snow. Markers also increase awareness of hydrant locations to highway personnel and residents, to aid in ensuring that hydrants are accessible through all seasons. County Emergency Management will coordinate the purchase and installation of hydrant markers across the county.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Ensure easy identification and access to fire hydrants
Useful Life	15 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Coordination with Deputy Fire Coordinators, Local Fire Departments, and Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, NFA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	County purchases markers, utilize local municipalities to install	< \$50,000	Not Recommended
	County purchases and installs markers throughout the county.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP PUBLIC AWARENESS CAMPAIGN ABOUT FIRE HYDRANTS CLEARING			
Project Number	A.1.9.b		
Hazard Mitigation Planning Goal[s]	A		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	Major Fire		
Description of Problem	Fire Hydrants need to be cleared after snow storms, so fire departments do not have to snow and debris from fire hydrant it can which can take time.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Residents and business owners can clear hydrants to help ensure ready access to hydrants when they are needed most, which helps fire departments save lives and preserve property. Create and implement an annual public awareness campaign throughout the county via county websites, local fire department websites, social media, and PSAs to encourage residents to shovel snow away from fire hydrants.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Ensure easy identification and access to fire hydrants in the event of an emergency.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Coordination with Local Fire Departments and Media Outlets		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Annually	Project Funding Sources	County Budget, NFA Grants
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop Materials and only promote on social media and public gathering locations	< \$50,000	Not Recommended - unlikely to reach target population
	Conduct outreach trainings to citizens and businesses	< \$50,000- Cost associated with printing, and conduction training	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONDUCT COUNTY-WIDE EMERGENCY MANAGEMENT TRAINING ASSESSMENT			
Project Number	A.1.10.a		
Hazard Mitigation Planning Goal[s]	B		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The County needs to conduct a county-wide emergency management training needs assessment.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conducting a comprehensive county-wide emergency management training needs assessment can ensure that all aspects of emergency management, such as through the 32 core capabilities, are examined for training needs for all stakeholders in Schuylers County. Once identified, training needs can be prioritized and requested from training providers, such as NYS DHSES, FEMA, the Red Cross, and others.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Coordinated training for all stakeholders
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuylers County Emergency Management Office		
Coordinating Agencies	County and Local Departments, Assisting Organizations		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Annually	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	Examination of County and Local Comprehensive Plans for Potential Training Needs.		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue to sponsor or request training opportunities based on perceived need.	< \$50,000	Not Recommended - While assumptions of training needs can be fairly accurate, gaps of information can exist.
	Conduct a county-wide emergency management training needs assessment	< \$50,000	Recommended Alternative - allows county to gather most accurate information
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONDUCT COUNTY-WIDE EMERGENCY MANAGEMENT TRAINING			
Project Number	A.1.10.b		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The assessment conducted in A.1.10a identified training needs of stakeholders and these trainings need to be offered.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Training is a key element of preparedness, helping to ensure that stakeholders have the knowledge and skills needed to conduct activities to execute plans and procedures based upon established standards. Training leads to safe proficiency of action, which saves lives, preserves property, and saves money. The County Emergency Management Office will request and coordinate training opportunities for stakeholders. Training may be offered online, in the county, regionally, elsewhere in the state, other states, or at national training centers such as FEMA's Emergency Management Institute.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Continue to coordinate training for all stakeholders
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County and Local Departments, Assisting Organizations, NYS DHSES, other training providers		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Provide Coordinated Training opportunities	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONDUCT FEASIBILITY STUDY FOR NEW EOC			
Project Number	A.2.1.a		
Hazard Mitigation Planning Goal[s]	B, C, D, J, L		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The current EOC has significant limitations due to size, structure, and location.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Commission a study on the viability of and options for a new county emergency operations center. While an assessment can be conducted internally, it may be most prudent to hire a consulting firm to examine the situation and make recommendations.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Identifying a course of action leading to a more effective and capable county emergency operations center
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Legislature, Planning Department, Building and Grounds Department		
Prioritization:	Priority 2	Desired Timeframe for Implementation	2025+
Estimated Time Required for Project Implementation	N/A	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	Examination of County and Local Comprehensive Plans and Zoning for Potential Site Identification.		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Conduct assessment internally	< \$50,000	Not Recommended
	Hire a consulting firm to examine the situation and make recommendations.	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: UPDATE LOCAL LAND USE REGULATIONS TO PROMOTE SAFETY AND MINIMIZE LOSSES			
Project Number	B.1.1.a		
Hazard Mitigation Planning Goal[s]	A, B, D, E, J		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Effective zoning or land use regulations are need to ensure that future development as and improvements to existing structures are constructed in the proper location.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate with each jurisdiction to establish up to date and meaningful zoning or land use regulations.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Encouraging Zoning and Land Use Regulations in each Municipality to promotes safety and minimizes losses to property.
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, EMPG
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate with each jurisdiction to establish up to date and meaningful zoning or land use regulations.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: PROVIDE TRAINING ON THE BENEFITS OF ZONING			
Project Number	B.1.1.b		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Training and guidance must be provided to jurisdictions will help ensure that their zoning and land use regulations are properly created and implemented to ensure that future development as well as improvements to existing structures are constructed in the proper location.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Provide training to jurisdictions on the benefits of zoning and land use regulations and how to create and implement them.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Encouraging Zoning and Land Use Regulations in each Municipality to promotes safety and minimizes losses to property.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024, 2026
Estimated Time Required for Project Implementation	Biennial trainings	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Provide training to jurisdictions on the benefits of zoning and land use regulations	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: PROVIDE LOW IMPACT DEVELOPMENT [LID] TRAINING			
Project Number	B.1.1.c		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All, Flooding		
Description of Problem	There is a need to train local municipalities on Low Impact Development [LID]		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Provide training, workshops, and guidance to jurisdictions on LID techniques around comprehensive land planning and engineering design approaches to maintain and enhance the pre-development hydrologic regime of urban and developing watersheds for municipal planning boards and elected officials.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Low impact development techniques compliment zoning and land use regulations paying special heed to flood prevention and thereby preventing losses.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023, 2025
Estimated Time Required for Project Implementation	Biennial trainings	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulation		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Provide training, workshops, and guidance to jurisdictions on low impact development [LID] techniques	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INCORPORATE HAZARD MITIGATION INTO COUNTY REFERABLE PROJECTS			
Project Number	B.1.1.d		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Changes to review procedures are needed to better incorporate hazard mitigation into County 239-m reviews.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Develop new criteria for the County Planning Department and their review of referable development projects throughout the County so that hazard mitigation is incorporated into the design stage of future growth.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - This will help to further hazard mitigation efforts county-wide and minimize future losses.
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024
Estimated Time Required for Project Implementation	6-8 months	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop new criteria for the County Planning Department and their review of referable development projects throughout the County	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: EXPLORE THE INTEGRATION OF HAZARD ZONING			
Project Number	B.1.1.e		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need for hazard zoning and high-risk hazard land use ordinances to be incorporated into local zoning laws.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Explore hazard zoning and high-risk hazard land use ordinances including stream set-back requirements, steep slope development restrictions, driveway drainage standards, erosion control, etc that can be incorporated into local zoning and land use laws, and work with municipalities on adoption.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - These activities help to further integrate hazard mitigation into zoning and land use regulations, thereby minimizing exposure and future losses
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Emergency Management Office, Watershed Protection Agency, Soil and Water Conservation District, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	1 year	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Explore hazard zoning and high-risk hazard land use ordinances	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP STORMWATER MANAGEMENT PLAN FOR FLOOD REDUCTION			
Project Number	B.1.1.f		
Hazard Mitigation Planning Goal[s]	A, B, D, E, J		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	A comprehensive stormwater management plan is need to examine surface water and runoff patterns in every jurisdiction.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Develop a stormwater management plan that includes subdivision regulations to control runoff, both for flood reduction and to minimize saturated soils on steep slopes that can cause land subsistence.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - The findings and recommendations in such a plan will be a reference for all zoning and land use regulations applied to new development and improved properties, as well as identifying future hazard mitigation projects to help control runoff in certain areas.
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County planning board, Emergency Management Office, Watershed Protection Agency, Soil and Water Conservation District, Highway Department, Local Planning and Zoning Boards, Southern Tier Regional Planning and Development Board, Rural Stormwater Coalition		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	12-18 months	Project Funding Sources	County Budget, Regional Planning Board Funds, Soil and Water Conservation District Funds
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Hire a consultant to develop a stormwater management plan.	\$50,000 - \$99,999	Not Recommended - Too costly and impractical.
	Work with STC Planning to develop a stormwater management plan.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: ESTABLISH STORMWATER RUN-OFF TRAINING OPPORTUNITIES FOR CODE ENFORCEMENT			
Project Number	B.1.2.a		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Local Code Enforcement Officials need additional training on stormwater run-off to ensure that development and improvements take place safely within established standards, both those derived from national and state regulation, as well as locally enacted regulations.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Establish and coordinate training opportunities for code enforcement on how they can impact hazards such as storm water run off		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Training will help ensure that code enforcement officers are aware of and apply all applicable standards and regulations to prevent future losses.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024, 2026
Estimated Time Required for Project Implementation	Biennial trainings	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Establish and coordinate training opportunities for code enforcement on how they can impact hazards such as storm water run off	< \$50,000 - Cost associated with developing training materials.	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONSISTENT CODE ENFORCEMENT TRAINING			
Project Number	B.1.2.b		
Hazard Mitigation Planning Goal[s]	B, D, E, J		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Local Code Enforcement Officials need additional training to ensure that development and improvements take place safely within established standards, both those derived from national and state regulation, as well as locally enacted regulations.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Provide information and guidance on the benefits of consistent code enforcement.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Training will help ensure that code enforcement officers are aware of and apply all applicable standards and regulations to prevent future losses
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	County Planning Board, Local Planning and Zoning Boards, Code Enforcement		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Existing Comprehensive Plans, Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop and provide information and guidance on the benefits of consistent code enforcement.	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REPLACE & UPGRADE CULVERTS UNDER ELEVATED COUNTY ROADS			
Project Number	B.1.3.a		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The County must continuously address county and local roadway drainage and stormwater management issues in order to reduce the risk of deterioration of the culvert, potential collapse, and uncontrolled stormwater runoff.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace or reinforce seven identified deep culverts under elevated county roads with a larger culverts to accommodate increase in storm water runoff. Culverts under elevated county roads pose a significant challenge to the county highway department as significant excavation is required through the base of the road to gain access to culvert.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Reduction in flood damage on County Roads.
Useful Life	25+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Local Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Funds, FHWA Grants
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended - will eventually result in full deterioration of the culvert potential collapse, and uncontrolled stormwater runoff.
	Replace only the culverts that are in the worst shape.	\$50,000 - \$99,999	Not Recommended
Find funding to replace all of the identified culverts	> \$100,000	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: ELEVATE BRIDGE OVER VANLOON CREEK			
Project Number	B.1.3.b		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Current bridge over Vanloon Creek is not high enough to adequately manage the creek running high as a result of rain/runoff. Stormwater currently undermines the road and bridge and washes over the roadway.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Elevate the bridge over Vanloon Creek in Town of Catharine, County Road 6.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing county and local roadway drainage and stormwater management issues
Useful Life	25+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Town of Catharine Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Funds, FHWA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace the bridge, but do not elevate it	> \$100,000	Not Recommended - short term fix only.
	Replace and elevate the bridge	> \$100,000	Recommended Alternative- Addressing this project proactively will prevent repetitive loss issues.
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REPLACE BOX CULVERT UNDER COUNTY RD 23			
Project Number	B.1.3.c		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	A box culvert is needed across County Road 23 near Stamp Road in the Town of Reading. Currently Stamp Road, County Road 23 and a private home are being flooded on a continual basis due to several under sized cross culverts under CR 23, and the railroad.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace the box culvert cross County Road 23 near Stamp Road in the Town of Reading. This would also involve a box culvert under the rail road itself.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing county and local roadway drainage and stormwater management issues
Useful Life	25+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Town of Reading Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - 2025
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	County and Local Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended - will eventually result in full deterioration of the culvert, potential collapse, and uncontrolled stormwater runoff. This can undermine the roadway and nearby structures, which can be of significant cost
	Install box culvert across County Road 23 near Stamp Road	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REPLACE WOODEN TRESTLE BRIDGE ON COOK ROAD			
Project Number	B.1.3.d		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The current bridge on Cook Road is compromised and could collapse in a larger storm event. Stormwater currently undermines the road and bridge and washes over the roadway.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace Wooden Trestle Bridge on Cook Road just North of County Road 1 with a metal/concrete bridge.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing county and local roadway drainage and stormwater management issues. Reducing potential in flood damage.
Useful Life	20+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Town of Hector Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Funds, FHWA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended - Bridge could collapse in large storm event.
	Replace bridge on Burr Road just north of County Road 1	> \$100,000	Recommended Alternative - Addressing this project proactively will prevent repetitive loss issues.
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: RAISE COUNTY ROAD 18 AND UPSIZE CULVERTS			
Project Number	B.1.3.e		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Upsizing the cross culverts and slightly raising its elevation is needed on County Road 18 just north of Beaver Dams Moreland Road. In concert with this the County Road 18 needs to be raised in order to prevent continual flooding of the road itself. The upslope stream crosses County Road 18 and flows into a DEC wetland causing a capacity issue during high intensity storm events.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Upsize and raise the culverts on County Road 18 and raise the road to eliminate flooding.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing county and local roadway drainage and stormwater management issues. Reducing potential in flood damage.
Useful Life	25+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Town of Dix Highway Departments, NYS DEC		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 -2025
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County and Local Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended - no action will eventually result in full deterioration of the culvert, potential collapse, and uncontrolled stormwater runoff
	Upsize cross culvert and slightly raise its elevation	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUE ROAD INSPECTION OF DITCHES AND CONTINUE BANK STABILIZATION EFFORTS			
Project Number	B.1.3.f		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is a need to continue stabilization efforts to address and prevent the impacts of fluvial erosion, which can undermine roadways and culverts and land areas, to ensure this there must be continued assessment and identification of needs which can prevent future losses.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue inspection of ditches and drainage structures county-wide, identify needs, and priorities and continue road ditch and road bank stabilization efforts as needed based on inspections		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing county and local roadway drainage and stormwater management issues
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Local Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County and Local Budgets
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue inspections and identifying needs and priorities	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: ESTABLISH A CACHE OF HEAVY EQUIPMENT FOR STREAM MANAGEMENT			
Project Number	B.1.3.g		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is currently a very limited availability of heavy equipment in Schuyler County, resulting in delays in projects and emergency work and a higher cost over time to rent equipment, if available. Along with the higher cost over time for equipment rentals are costs associated with not addressing projects and emergency work in a timely fashion.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Establish a cache of heavy equipment for stream management and emergency stream intervention for deployment within Schuyler County and to assist others.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Jurisdictions will have direct access and control over these caches, resulting in ensured availability and rapid deployment when needed.
Useful Life	10+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Schuyler County and Local Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2026
Estimated Time Required for Project Implementation	Purchase of equipment each year to build up cache	Project Funding Sources	Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Leave local jurisdictions to purchase their own heavy equipment.	\$50,000 - \$99,999	Not Recommended
	Create and deploy caches of heavy equipment for use by local highway departments for emergency stream intervention	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REALIGN CAYUTA CREEK ALONG COUNTY ROAD 224			
Project Number	B.1.3.h		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Portions of County Road 224 are currently compromised and at risk of failure do to the current flow and velocity of Cayuta Creek.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Realign bed of Cayuta Creek along a portion of County Road 224 in the Town of Cayuta to its natural bed to decrease water velocity. Install flood attenuation wetland.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Returning Cayuta Creek to its natural stream bed and the creation of a flood attenuation wetland will similarly slow the velocity of the stream and provide area for floodwaters to dissipate, reducing losses to county and local roads.
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	County Highway Department, Town of Cayuta Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2024
Estimated Time Required for Project Implementation	3 months	Project Funding Sources	County Budget, Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Realign bed of Cayuta Creek along a portion of County Road 224	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REPLACE CULVERTS ALONG COUNTY ROAD 6			
Project Number	B.1.3.i		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Cayuta Inlet is prone to repetitive damages along and between County Road 6, Chapman Road, and Cayutaville Road during flooding. Replacement of culverts is necessary to enlarge and reinforce these passages.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace four existing culverts, three with box culverts, along County Road 6 in the Town of Hector at Chapman Road. Install flood attenuation wetland and perform stream stabilization to prevent flooding along Cayutaville to reduce stream velocities and help dissipate flood waters.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - These interrelated projects will prevent further repetitive damages to roads, including undermining and washout, as well as potential damages to structures in the area.
Useful Life	25+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	County Highway Department, Town of Hector Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	3 months	Project Funding Sources	County Budget , Hazard Mitigation Grants, FHwy Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace only half of the culverts with no food attenuation wetlands.	\$50,000 - \$99,999	Not Recommended
	Replace four existing culverts, three with box culverts, along County Road 6 in the Town of Hector at Chapman Road and he installation of a flood attenuation wetland	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUE COUNTY-WIDE DITCH STABILIZATION PROGRAM			
Project Number	B.1.3.j		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is a need to continue road ditch stabilization program to prevents damage to adjacent roadways.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue Road Ditch Stabilization utilizing hydro-seeding, rock rip rap, flexi-mat and erosion control fabrics to stabilize steep highly eroded slopes that are impact road ways, and water quality.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Continue to address county and local roadway drainage and stormwater management issues
Useful Life	5-10 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Local Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	1 month per project	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue Road Ditch Stabilization Program	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUE COUNTY-WIDE UPSIZING OF CROSS CULVERTS AND DRIVEWAY CULVERTS			
Project Number	B.1.3.k		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Drainage and stormwater management issues must be addressed on county and local roadways by increasing the overall size of cross culverts and driveway culverts.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Increasing the overall size of cross culverts and driveway culverts to aid in the reduction of flood damage from high intensity short duration storm events.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Aid in the reduction of flood damage from high intensity short duration storm events.
Useful Life	25+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Schuyler County Highway Department, Local Highway Departments, Private Land Owners		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Increasing the overall size of cross culverts and driveway culverts	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: IMPLEMENTATION OF RETENTION PONDS IN UPPER SUB REACHES OF FLOOD PRONE WATERSHEDS			
Project Number	B.1.3.I		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	High intensity short duration storm events result in significant flooding that must be contained and slowed prior to reaching flood prone areas.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Implementation of retention ponds in the upper sub reaches of our most flood prone watersheds. Including but not limited to Seneca Lake, Tobehanna Creek, Meads Creek, Catharine Creek, Catlin Mill Creek, etc... Retention ponds aid in the reduction of peak flow during high intensity short duration storm events.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Aid in the mitigation of damage to public and private infrastructure due to the limitation of engineering design capacities that these storm events regularly exceed.
Useful Life	25+ years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Local Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Implementation of retention ponds in the upper sub reaches of our most flood prone watersheds.	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY				
PROJECT NAME: CONTINUE COUNTY-WIDE STREAM STABILIZATION PROGRAM				
Project Number	B.1.3.m			
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G			
Project Category [POETE]	Planning and Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	There is a need to continue the stream stabilization program for maintaining and repairing damage to streambanks throughout the county			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Continue stream stabilization program for maintaining and repairing damage to streambanks throughout the county			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Medium - Stream stabilization addresses and prevents the impacts of fluvial erosion, which can undermine roadways and culverts and land areas around structures, thereby preventing damage.	
Useful Life	5-10 years			
Estimated Cost	\$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Schuyler County Soil and Water Conservation District			
Coordinating Agencies	Schuyler County Highway Department, Local Highway Departments, Private Land Owners			
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026	
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Grants, other State and Federal Sources	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Continue stream stabilization program	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: CONTINUE COUNTY-WIDE STREAM INSPECTION PROGRAM			
Project Number	B.1.3.n		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is a need to continue stream inspections and assessments county-wide to identify segments with erosion, debris, or other problematic conditions		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue stream inspections and assessments county-wide to identify segments with erosion, debris, or other problematic conditions		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Stream stabilization addresses and prevents the impacts of fluvial erosion, which can undermine roadways and culverts and land areas around structures, thereby preventing damage.
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Local Highway Departments		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
		< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: UPDATE FLOODPLAIN MAPS			
Project Number	B.1.4.a		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G, H, J, K		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	FIRMs for Schuyler County are severely outdated, making them of limited utility. LIDAR topographic scans utilize current technology to provide high-accuracy elevation data.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Update Floodplain Maps and provide other Topographical Information Services		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	High - Up to date FIRMs will aid significantly in the identification of floodplains which will contribute to flood mitigation efforts.
Useful Life	30+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	Schuyler County Emergency Management Office, Schuyler County Soil and Water Conservation District, Schuyler County Watershed Protection Agency, Southern Tier Regional Planning and Development Board		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024-2025
Estimated Time Required for Project Implementation	18 months	Project Funding Sources	Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Wait for FEMA to prioritize the requisition of new FIRMs for Schuyler County.	Low to \$50,000 - \$99,999	Not Recommended - Despite multiple inquiries, FEMA does not hold the update of new FIRMs as a priority, therefore it could be several years before a project would be initiated.
	Update Floodplain Maps and provide other Topographical Information Services	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INSTALL REAL-TIME WATER LEVEL MONITORING GAUGE ON CATHARINE CREEK			
Project Number	B.1.5.a		
Hazard Mitigation Planning Goal[s]	H		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is no real-time water level monitoring gauge on Catharine Creek in Montour Falls.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Real time monitoring of stream levels helps to protect lives and property by providing immediate information from which emergency decisions can be made. Install real-time water level monitoring gauge on Catharine Creek in Montour Falls near the Route 14 bridge by the NYS Fire Academy		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	High - Increased awareness of stream flood stages
Useful Life	10+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Environmental Emergency Services, Inc.		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget, Hazard Mitigation Grants
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Install Monitoring Gauge	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: MAINTAIN NWS STROM READY DESIGNATION			
Project Number	B.1.6.a		
Hazard Mitigation Planning Goal[s]	A, B, H		
Project Category [POETE]	Planning, Organizing, Equipping, Training, and Exercising		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There are requirements to maintain NWS Storm Ready designation.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue activities to maintain requirements of NWS Storm Ready designation. Activities associated with acquiring and maintaining the Storm Ready designation contribute to preparedness and mitigation of multiple hazards across the whole community, thereby minimizing losses and saving lives.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Maintain county-wide whole-community hazard mitigation efforts
Useful Life	5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	N/A		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Maintain Designation	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP STRATEGY TO IMPROVE HIGH-HAZARD DAMS			
Project Number	B.2.1.a		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G, I, K		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Several privately owned dams in Schuyler County have been rated by NYS DEC as high-hazard. A course of action must be determined for each dam.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	The impacts of dam failures could be significant, resulting in the loss of life and significant damage to property and infrastructure. Convene meetings with the owners of identified high-hazard dams to determine the best course of action for addressing the deficiencies of each dam		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Reducing the risk of high hazard dams
Useful Life	20+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, County Highway Department, NYS DEC		
Prioritization	Priority 2	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Meet with owners and identify a best course of action, but not provide support for implementation	< \$50,000	Not Recommended
	Meet with owners and identify a best course of action, provide support for implementation	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: IDENTIFY PROPERTIES WITH HIGHER RISK OF FLOODING			
Project Number	B.2.3.a		
Hazard Mitigation Planning Goal[s]	B, C, D, J		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Throughout the County there are properties at higher risk of flooding or other hazards which may be eligible for mitigation programs, but there is not a single source for identifying these properties and their owners.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Identify opportunities for property acquisition, relocation, elevation, and flood proofing		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Reducing number of high risk properties
Useful Life	10+ years		
Estimated Cost	> \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Schuyler County Watershed Protection Agency, Schuyler County Soil and Water Conservation District, Local Officials, Property Owners		
Prioritization	Priority 2	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Identify parcels, but not provide support and resources for relocation or flood proofing	< \$50,000	Not Recommended
	Identify opportunities for property acquisition, relocation, elevation, and flood proofing	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: FLOOD MITIGATION - HUMAN SERVICES COMPLEX			
Project Number	B.2.4.a		
Hazard Mitigation Planning Goal[s]	C, D, L		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding/ Critical Facilities		
Description of Problem	The Schuyler County Human Services complex is within the FIRM Zone B, indicating a 500 year flood area. The Schuyler County Human Services complex has an elevated risk of flooding due to its location relative to Catharine Creek. Principal agencies must convene to determine possible courses of action to protect the building from flooding, minimizing damage to this critical infrastructure.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Identify flood mitigation engineering projects to better protect the Schuyler County Human Services Complex		
Is this Project Related to a Critical Facility	Yes	X	No
Level of Protection	N/A	Estimated Benefits	High - Reducing the risk to critical infrastructure
Useful Life	5-10 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Department of Buildings and Grounds		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Schuyler County Emergency Management Office		
Prioritization	Priority 2	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Identify projects but not pursue mitigation implementation	< \$50,000	Not Recommended
	Identify projects and pursue funding for implementation	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: REVIEW AND UPDATE CYBERSECURITY POLICIES			
Project Number	C.1.1.a		
Hazard Mitigation Planning Goal[s]	B, C		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Cyber Attack		
Description of Problem	Policies and practices relative to cybersecurity and the county's IT infrastructure must regularly be reviewed to ensure that industry standards are met to protect against multiple forms of cyberattack.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Review and update county cybersecurity policies, monitor implementation and compliance		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Protecting against current and future cybersecurity risks that could result in theft or corruption of data or damage to infrastructure
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Information Technology Department		
Coordinating Agencies	County Department Heads, GST BOCES		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Annually review and update policies and monitor	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: UPGRADE APPLICATIONS TO COMPLY WITH CYBERSECURITY POLICIES AND PRACTICES			
Project Number	C.1.2.a		
Hazard Mitigation Planning Goal[s]	B, C		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Several applications in use have a greater susceptibility to cyberattack and must be replaced to mitigate against this hazard.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Identify and replace legacy applications which do not comply with cybersecurity policy and current practices		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Protecting against current and future cybersecurity risks that could result in an result in loss or corruption of data or damage to infrastructure
Useful Life	1-5 years		
Estimated Cost	\$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Information Technology Department		
Coordinating Agencies	County Department Heads, GST BOCES		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continuously identify and replace legacy applications that do not comply with current practices and policies	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: MAINTAIN AN ACTIVE HAZARD MITIGATION PROGRAM			
Project Number	D.1.1.a		
Hazard Mitigation Planning Goal[s]	B, I		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Local responders need to increase their knowledge and skills for responding to pipeline emergencies.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate training for emergency responders on how to recognize and respond to pipeline emergencies. This will increase their knowledge and skills for responding to pipeline emergencies, making their responses more effective and efficient, resulting in minimizing loss of life and property. The Rural Domestic Preparedness Consortium has ideal training available for this.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness of pipeline hazards
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	LPG and NG Pipeline Operators, Local Responders, State DHSES		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate training for emergency responders	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: PROMOTE 811 PROGRAM			
Project Number	D.1.1.b		
Hazard Mitigation Planning Goal[s]	A, B, I		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need for increased awareness among public works personnel, private contractors, and property owners of the caution necessary to prevent damage to underground pipelines and the need to utilize 811 [Call Before You Dig]		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate promotion of 811 program to prevent excavation damage to underground pipelines to help prevent loss of life and property and will help maintain the integrity of critical infrastructure		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Increased awareness of pipeline hazards
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	County Highway Department, Dig Safety New York		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate promotion of 811	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INCREASE AWARENESS PIPELINE HAZARDS			
Project Number	D.1.1.c		
Hazard Mitigation Planning Goal[s]	All		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	The identification of underground pipeline areas are not currently incorporated into local land use regulations		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate integration of planned land use development near pipelines in to review procedures.		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	Low - Awareness of these hazards helps to prevent loss of life and property.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Planning Department		
Coordinating Agencies	Schuyler County Emergency Management Office, County and Local Planning Boards		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	Local Zoning and Land Use Regulations		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate integration of planned land use development near pipelines	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: COORDINATE TRAINING FOR RAIL INCIDENTS			
Project Number	D.1.2.a		
Hazard Mitigation Planning Goal[s]	B, C, K		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Local responders need to increase their knowledge and skills for responding to rail emergencies		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate training for emergency responders on how to recognize and respond to rail incidents to make their responses more effective and efficient, resulting in minimizing loss of life and property. The Rural Domestic Preparedness Consortium provides accessible training for this.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness of freight rail hazards
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	Rail Operators, State DHSES, Local Responders		
Prioritization	Priority 2	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate training for emergency responders	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: COORDINATE TRAINING FOR HIGHWAY EMERGENCIES			
Project Number	D.1.3.a		
Hazard Mitigation Planning Goal[s]	B, C, K		
Project Category [POETE]	Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Local responders need to increase their knowledge and skills for safely responding to highway emergencies		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Coordinate training for emergency responders on how to recognize and respond to highway emergencies to make their responses more effective and efficient, resulting in minimizing loss of life and property.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness of and prevention against highway emergency incidents
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Emergency Management Office		
Coordinating Agencies	State DHSES, Local Responders		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024, 2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Coordinate training for emergency responders	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: INCREASE ENFORCEMENT OF VEHICLE AND TRAFFIC LAWS			
Project Number	D.1.3.b		
Hazard Mitigation Planning Goal[s]	A, B, C, K		
Project Category [POETE]	Organizing		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Vehicle and Traffic laws need to be continuously and consistently enforced in order to protect the public and prevent highway emergency incidents, protecting lives and property.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Enforcement of road weight restrictions, brake check areas, and other related V&T laws.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Increased awareness of and prevention against highway emergency incidents
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Sheriff's Department		
Coordinating Agencies	State Police, Watkins Glen Police Department, DEC Law Enforcement		
Prioritization	Priority 1	Desired Timeframe for Implementation	2021-2026
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	Agency Operating Budgets
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Enforce of road weight restrictions, brake check areas, and other related V&T laws	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: DEVELOP ACTIVE SHOOTER RESPONSE PLAN, PROTOCOLS AND TRAINING			
Project Number	E.1.1.a		
Hazard Mitigation Planning Goal[s]	B, C		
Project Category [POETE]	Planning, Training, Exercising		
RISK/VULNERABILITY			
Hazard of Concern	Active Shooter		
Description of Problem	Local responders need to remain current and proficient with response standards and protocols. There is a need to prepare for active shooter responses		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Develop active shooter response plan and protocols for Schuyler County. Once developed Design, conduct, and evaluate an active shooter tabletop exercise and full scale exercise		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Planning for incidents and exercising protocols is the foundation of all preparedness efforts, which will ultimately help better organize responders to minimize loss of lives.
Useful Life	1-5 years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Sheriff's Department		
Coordinating Agencies	State Police, Watkins Glen Police Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Review and Update Annually	Project Funding Sources	County Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Develop active shooter response plan and protocols	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

JURISDICTION: SCHUYLER COUNTY			
PROJECT NAME: ENHANCE COUNTY POD CAPABILITIES			
Project Number	F.1.1.a		
Hazard Mitigation Planning Goal[s]	A, B, L		
Project Category [POETE]	Organizing, Training		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	There is a need for additional Medical Reserve Corps [MRC] volunteers help supplement and support public health efforts for large events, such as PODs.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Recruit and train new MRC members, this will increase the efficiency and effectiveness of these efforts and potentially saving lives.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Enhanced County-wide Point of Distribution [POD] Capability
Useful Life	5+ years		
Estimated Cost	< \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Public Health Department		
Coordinating Agencies	Schuyler County Emergency Management Office, Community Organizations		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	Ongoing	Project Funding Sources	County Budget
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Recruit and train new MRC members	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|LONG-TERM VULNERABILITY REDUCTION|

PLAN MAINTENANCE

The Director of Emergency Services will convene the Hazard Mitigation Committee as needed to monitor, evaluate, and update this Hazard Mitigation Plan. Meetings will occur at least annually. Moving forward, this Committee will include a representative from each municipality, relevant county agencies, and other organizations as needed. This Committee is responsible for monitoring and evaluating the progress for each mitigation action in this plan. Sections of this plan will be reviewed and updated whenever conditions change that may affect the plan. A complete review will be conducted at least every five years for a full update of the plan in accordance with state and federal guidance. In order to ensure adoption of the revised plan within its five-year cycle, the Hazard Mitigation Committee will begin their review and efforts for the five year update no later than four years after the adoption of the previous version. The Director of Emergency Services continuously monitors hazard conditions and mitigation activities throughout the county and will reconvene the committee more frequently if conditions warrant action. Municipalities and county agencies are asked to report newly identified hazard mitigation projects with the Hazard Mitigation Project Worksheet.

When the Committee updates the plan, they will review hazard analysis, risk assessment, and vulnerable asset information and incorporate any additional or updated information. If the nature or magnitude of risks has changed or if additional information is available, these sections of the plan will be revised as appropriate. If possible, additional documentation will be assembled of the ongoing costs associated with flash flooding [to evaluate the cost effectiveness of preventative measures]. The Committee will review each goal in the mitigation strategy to determine the ongoing relevance to changing situations in the county. The parties responsible for the various implementation actions will report on the status of their efforts and this progress will be documented. After reviewing recommended project types in the current state hazard mitigation plan, the Committee will develop revised actions that represent the next steps toward achieving the county's mitigation goals. If other plans applicable to Schuyler County have been updated, they will be reviewed and the information incorporated as appropriate. The Committee will also evaluate the availability of resources for implementing the plan and will seek to identify additional resources or grant programs to facilitate plan implantation.

A draft plan with the Hazard Mitigation Committee's recommended revisions will be distributed to committee members and other interested parties to review. The draft plan will be made available on the Schuyler County website for review by municipal staff, boards, and the public. This local review process will ensure consistency with municipal planning objectives, community values, and other planning efforts. All comments received during this local review period will be reviewed and analyzed by relevant members of the Hazard Mitigation Committee and appropriate modifications incorporated into the updated plan.

The Hazard Mitigation Committee will solicit public input and comments each time this plan is revised. Public involvement will be promoted through county and municipal websites, newspapers, newsletters, posted notices at municipal offices, and directly contacting potentially interested individuals. The Director of Emergency Services will seek opportunities to increase private sector membership on the Hazard Mitigation Committee. The public will have the opportunity to express opinions and comments to their respective municipal governments or to other committee members. A copy of the most current plan will be available on the Schuyler County website.

Once the Hazard Mitigation Plan is updated and comments have been adjudicated, it will be adopted by all governing bodies and the adoption resolutions included in the plan. The plan will be distributed to each municipality, public libraries, county offices, the New York State Division of Homeland Security and Emergency Services, and the Federal Emergency Management Agency.

|TOWN OF CATHARINE|

This section presents the jurisdictional annex for the Town of Catharine. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Catharine; an assessment of the Town of Catharine's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

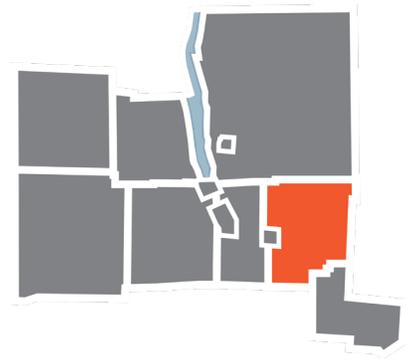
CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Martin Vondracek	Address: 106 Grant Road, Odessa, NY 14869 Phone: [607] 594-3382 Email: townofcatharine@aol.com
Code Enforcement Officer Richard Carroll	Address: 5182 Park Road, Odessa, NY 14869 Phone: [607] 594-2273 Cell: [607] 731-0357 Email: tcathcode@empireaccess.net
Town Supervisor Richard Lewis	Address: 5182 Park Road, Odessa, NY 14869 Phone: [607] 594-2273 Email: catharineclerk@gmail.com

TOWN PROFILE

The Town of Catharine is located in the southeastern portion of Schuyler County. It shares a northern border with the Town of Hector, a western border with the Town of Montour, a southern border with Chemung County and the Town of Cayuta, and an eastern border with Tompkins County. The Town of Catharine is governed by an elected Supervisor and a four-person Town Board.

Established in 1798, the Town of Catharine's first settlers took up residence in "Johnson's Settlement," which is now a hamlet of the same name. Although a transient hunter by the name of Paulding had resided in the town briefly, John Mitchell and his family became the first permanent settlers. Their name is still carried today in Mitchell Hollow. The first congregations to build a church in the Schuyler County region were members of the Methodist Episcopal faith and the Protestant Episcopal faith [St. John's]. In 1809, the first Church was built in Catharine, followed by a second in 1810. Additionally, the Catharine Valley Agricultural Society was founded in 1826, decades ahead of any county fair unit in the region.

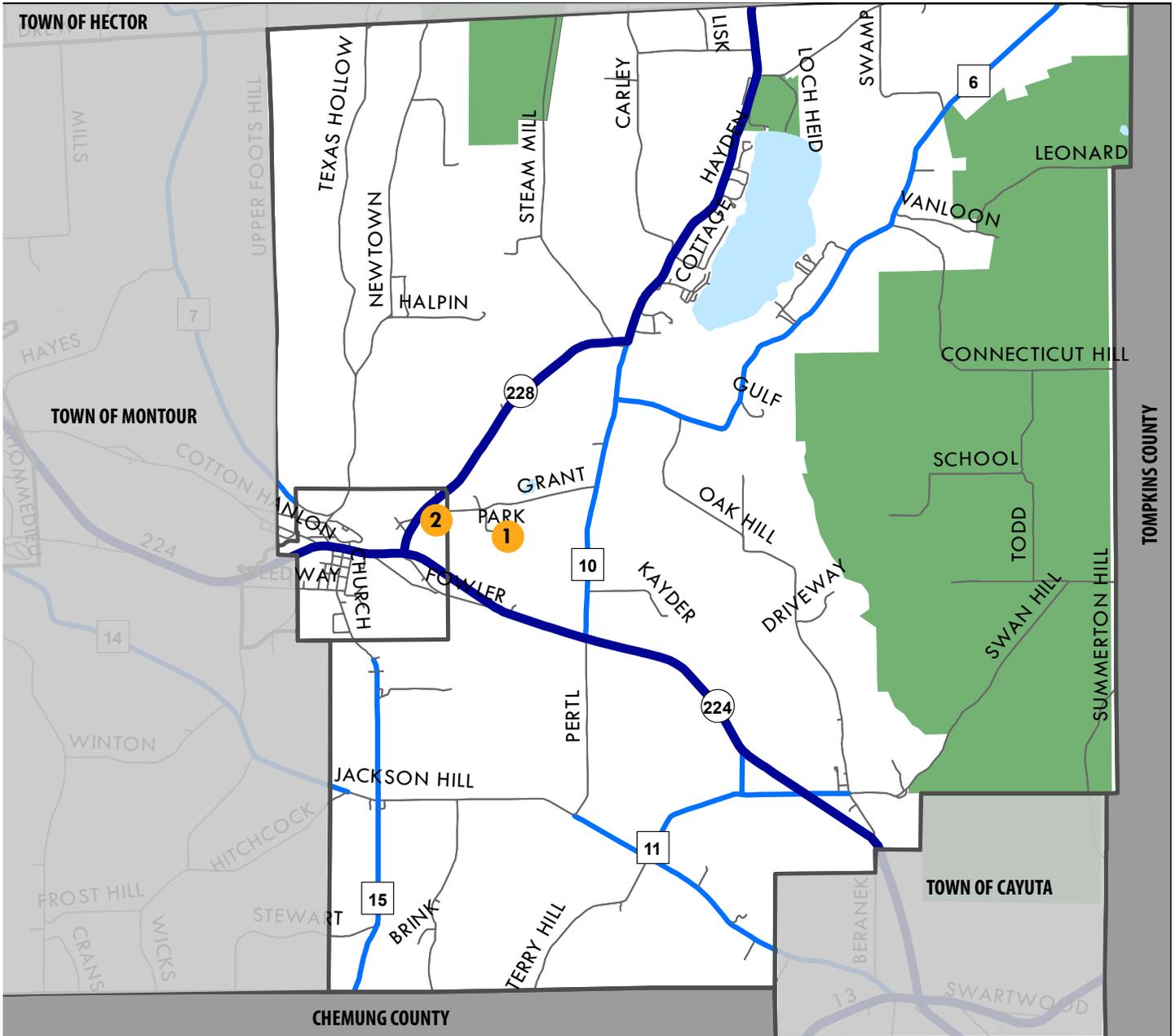


The Town is rural in character, with large areas of forest and farmland. The housing stock is predominantly single-family, and the businesses are family-run. Residents and visitors benefit from the natural beauty, and recreational areas including Connecticut Hill, Texas Hollow, and Cayuta Lake. There is a public boat launch that provides public lake access, and it, like Connecticut Hill and Texas Hollow, is managed by the New York State Department of Conservation.

Despite the difficult economic conditions, it faces, the Town of Catharine is a quaint place with plenty of outdoor activities, recreational areas, and rural pastures. Residents appreciate the small-town feel offered by Catharine and value their access to clean water and air, as well as open natural areas.

[TOWN OF CATHARINE]

FIGURE 30: Town of Catharine Critical Facilities



<p>LAND AREA Land: 32.3 sq/mi Water: 0.6 sq/mi Density: 27 people/sq mi</p>	<p>POPULATION 2020: 1,651 [-6.3% Change] 2010: 1,762 Median Age: 46.4</p>	<p>MEDIAN INCOME \$51,150</p>	<p>MEDIAN HOME VALUE \$118,000</p>	<p>POVERTY RATE 12.6%</p>	<p>EMPLOYMENT RATE 55.7%</p> <p>Average Commute 27.0 mins</p>

|TOWN OF CATHARINE|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	5182 Park Road, Odessa, NY 14869	No	No
2	Highway Department	106 Grant Road, Odessa, NY 14869	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, and temporary and permanent housing must be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Catharine does not have any designated emergency evacuation routes, but State Routes 224 and 228 would be considered the primary roads used during certain emergency events. As evacuation routes are specific to hazardous events, routes will vary according to the event's location.

Sheltering

The Town of Catharine has not identified sites for residents to shelter during emergencies or storm events. However, the Odessa Central School District, located within the Village of Odessa, has been identified as a potential shelter and could accommodate residents within the Town of Catharine. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Catharine has not identified sites for temporary housing placement for residents displaced by a disaster. However, the Town owns approximately 10 acres of land off Park Road that could be used for temporary trailers depending on the nature of the disaster. In the event temporary housing is needed, the Town will work with the County to determine and set up suitable locations.

Permanent Housing

The Town of Catharine recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Catharine does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|TOWN OF CATHARINE|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Catharine and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	11/2014	Code Enforcement Officer
Comprehensive Plan	Yes	05/2015	Town Board/ Planning Board
Zoning Code	Yes	12/2016	Planning Board/ Zoning Board of Appeals
Subdivision Regulations	Yes	12/2016	Planning Board
Site Plan Review	Yes	12/2016	Planning Board
Flood Damage Prevention Law	Yes	08/1989	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Catharine.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Climate Smart Community Designation	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Catharine.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital Improvements Project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

[TOWN OF CATHARINE]

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 27: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Catharine	3	\$241,500	\$2,642

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Town of Catharine is most concerned with flooding, particularly near the inlet and outlet of Cayuta Lake. Hosenfeld Road and Cayutaville Road, to the north of the lake, and Oak Hill Road to the south of the lake tend to experience the most repetitive impacts from flooding.

There is concern on Pertl Road, where a large dairy farm expanded its operation. First, an aged and deteriorating 5' diameter steel culvert pipe must be replaced with a box culvert. The image to the right shows the deteriorated condition of the culvert pipe and headwall. Additionally, the volume and weight of trucking traffic on Pertl Road for the new farm far exceeds the current rating of the road. To ensure safety and viability of the road for the farm, local residents, and others who use it, an upgrade of the road is required, including widening the road and installing a deeper pave to accommodate the heavy equipment and trucks.



Culvert under Pertl Road, August 2015
photo credit: Schuyler County Emergency Management

TABLE 28: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Catharine	6/25/2009	Thunderstorm Wind	\$ 2,000.00
Catharine	4/27/2011	Thunderstorm Wind	\$ 60,000.00
Catharine	6/18/2017	Thunderstorm Wind	\$ 4,000.00

CHANGES IS DEVELOPMENT

The Town of Catharine has experienced minimal development changes within hazard-prone areas. Since the last update, the primary development within the Town has been the continued expansion of the large dairy farm located on County Rd 14 in the area of Pertl Road. This expansion has not changed the vulnerability of any hazard-prone areas but has increased the number of farm vehicles utilizing local roads and large trucks transporting milk which continues to tax the deteriorating culvert on Pertl Rd . In the area around Cayuta Lake, there has not been any significant new development, but since COVID, there has been an increase in the usage of lakefront properties. This increase in the usage of these properties has not resulted in a change or increase in the risk of flooding or storm damage. However, it has increased the density of residents who could need emergency services in this area should a storm event occur.

|TOWN OF CATHARINE|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	Town offices and the highway garage are the only identified critical infrastructure in the town aside from roadways.	Costs of full losses to the town office building or highway garage would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage if all equipment was inside.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
NATURAL RISKS			
Flooding	<p>While town population has seen a general decrease in the last decade, there has been some development in the Cayuta Lake area, although mostly along the western and south-eastern shores where no significant flood hazard exists.</p> <p>The town has 168 parcels located within the 100 year floodplain, valued at almost \$25M, although this is mostly farm land with little development within these areas.</p>	<p>There has been little significant flooding impact on Catharine of real property. There are three NFIP policies in force, with no historical claims. The most significant private damages would be to farmland.</p> <p>Damages to roadways and drainage systems are the most significant concern, with potential damages ranging from minimal to several hundreds of thousands of dollars depending on the scope of impact. [per town highway superintendent]</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p> <p>Key Issue: Localized flooding at inlet and outlet of Cayuta Lake.</p>
Severe Wind/ Tornado	The highest threat lies with mobile homes. The town records 67 mobile homes, many of which reside among three mobile home parks.	<p>Little historical wind damage has occurred in the last 16 years. There has only been recorded property damages from thunderstorms in 2009 [~\$2000 damage] and 2011 [~\$60,000 damage]. Future potential damages are likely to remain under \$100,000 per occurrence.</p> <p>With the majority of land use as forest and agriculture, the greatest impacts of wind damage lie in blown down and crop damage. Mobile homes are still permitted within the town, although zoning has restricted the addition of additional units.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.	County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Given the lower population of Catharine, damages are generally expected to be in the thousands for the town.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	While the geography of the Town of Catharine does have some steeply elevated terrain, there is little threat to critical infrastructure from any land substance.	\$0	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide. However, with less infrastructure in Catharine, damages would likely be a low percentage of this.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Random damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. Most crops in Catharine are planted annually, minimizing potential losses, although some losses may be realized.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Earthquake	Roads and municipal buildings	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture. Many agricultural areas in the town are located in floodplain areas, which generally makes those areas less susceptible to drought conditions.	While agriculture is a significant industry in Catharine, high value crops are limited.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Catharine has significant forested area, the majority of which is protected habitat for wildlife. The terrain limits inception and spread of wildfire, making any that do start easy to contain.	Terrain and vegetation types significantly limit the inception, spread, and damages of wildfire, as demonstrated by the lack of historic occurrences. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings. Catharine zoning regulations dictate distances between buildings, which creates buffer zones for fires.	Due to low density, damages from structure fires are generally isolated. Losses are generally well under \$300,000.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and limited business and industry within the town.	Catharine has limited access to high speed internet. Cyber attack is only likely to result in loss of data and computer hardware. There is no infrastructure to be damaged within the town from a cyber attack.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	State Routes 224 and 228 are most likely to carry hazardous materials through the town, although quantities are limited. Hazardous materials used in agriculture, as well as propane and heating oil are common on local roads. An LPG pipeline does cross the northern portion of town	Due to the quantity and nature of materials, impacts are likely to be very localized to the incident site, including roadway damages and damages to nearby structures. Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town. Damages would be expected to be less than \$500,000, not including clean-up costs; although environmental impacts could far exceed this amount.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release- Fixed Site	Town highway garage and large farms.	Damages could range as high as several hundred thousand dollars in extreme cases.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building or a local business.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	A population density of fewer than 40 persons per square mile can contribute to social distancing and limit exposure. However over 50% of employed persons in the town work in education, which can contribute to the spread of disease.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	State Routes 224 and 228 provide the highest risk for a significant transportation accident, although traffic on these state routes is generally not heavy.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Biological Agent Release	No identified susceptibility.	Not likely to impact any structures in the town.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The town offices and local businesses are likely to be the only targets of such an attack	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
RDD	The town offices and local businesses are likely to be the only targets of such an attack	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Local agriculture.	With several large milking operations in the town, the most significant disease concern is for cows. A catastrophic disease outbreak would result in several hundreds of thousands of dollars in immediate losses, with even greater long-term losses.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, businesses.	Limited	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Town municipal buildings, businesses, farms.	Most businesses and farms have generators, limiting losses.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.

|TOWN OF CATHARINE|

TABLE 29: Town of Catharine - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	<p>Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most.</p> <p>Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Catharine. The hazard mitigation goals for Schuyler County and the Town of Catharine are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms

|TOWN OF CATHARINE|

GOAL	DESCRIPTION	HAZARD TYPE
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

[TOWN OF CATHARINE]

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|TOWN OF CATHARINE|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Catharine, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF CATHARINE				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE HIGHWAY GARAGE & TOWN HALL				
Project Number	A.1.7.g			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	All, Critical Facilities			
Description of Problem	The Town of Catharine Highway Garage and Town Hall currently do not have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Catharine Highway Garage and Town Hall.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.	
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Catharine Highway Department			
Coordinating Agencies	Town of Catharine Government, Schuyler County Emergency Management			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	\$50,000 - \$99,999	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generators	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|TOWN OF CATHARINE|

JURISDICTION: TOWN OF CATHARINE				
PROJECT NAME: REPLACE STEEL CULVERT UNDER PERTL ROAD				
Project Number	B.1.3.o			
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	The culvert under Pertl Road can not sufficiently accommodate storm water during flooding events.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Replace and upgrade 5' steel culvert with box culvert under Pertl Road in the Town of Catharine			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Medium - Allow better passage of water during flooding, making flood water less prone to create damages to structures and undermine roadways.	
Useful Life	25+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Catharine Highway Department			
Coordinating Agencies	Schuyler County Soil and Water Conservation District			
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025	
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Town Funds, Hazard Mitigation Funds	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Replace 5' steel culvert with box culvert under Pertl Road	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|TOWN OF CAYUTA|

This section presents the jurisdictional annex for the Town of Cayuta. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Cayuta; an assessment of the Town of Cayuta’s risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

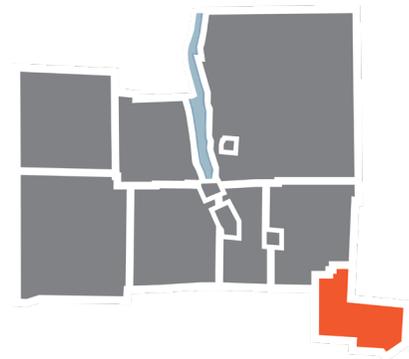
CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Thomas Beach	Address: 6360 State Route 224, Cayuta, NY 14824 Phone: [607] 594-2219 Email:
Code Enforcement Officer Harold Russell	Address: 6360 State Route 224, Cayuta, NY 14824 Phone: [607] 594-2507 Cell: [607] 481-8663 Email:
Town Supervisor Brandon Theetge	Address: 6360 State Route 224, Cayuta, NY 14824 Phone: [607] 594-2507 Email: cayutatownclerk@gmail.com

TOWN PROFILE

The Town of Cayuta is located in the southeastern corner of Schuyler County, surrounded on three sides by Chemung County and sharing a northern border with Tompkins County. Town of Cayuta is governed by an elected Supervisor and a four-person Town Board.

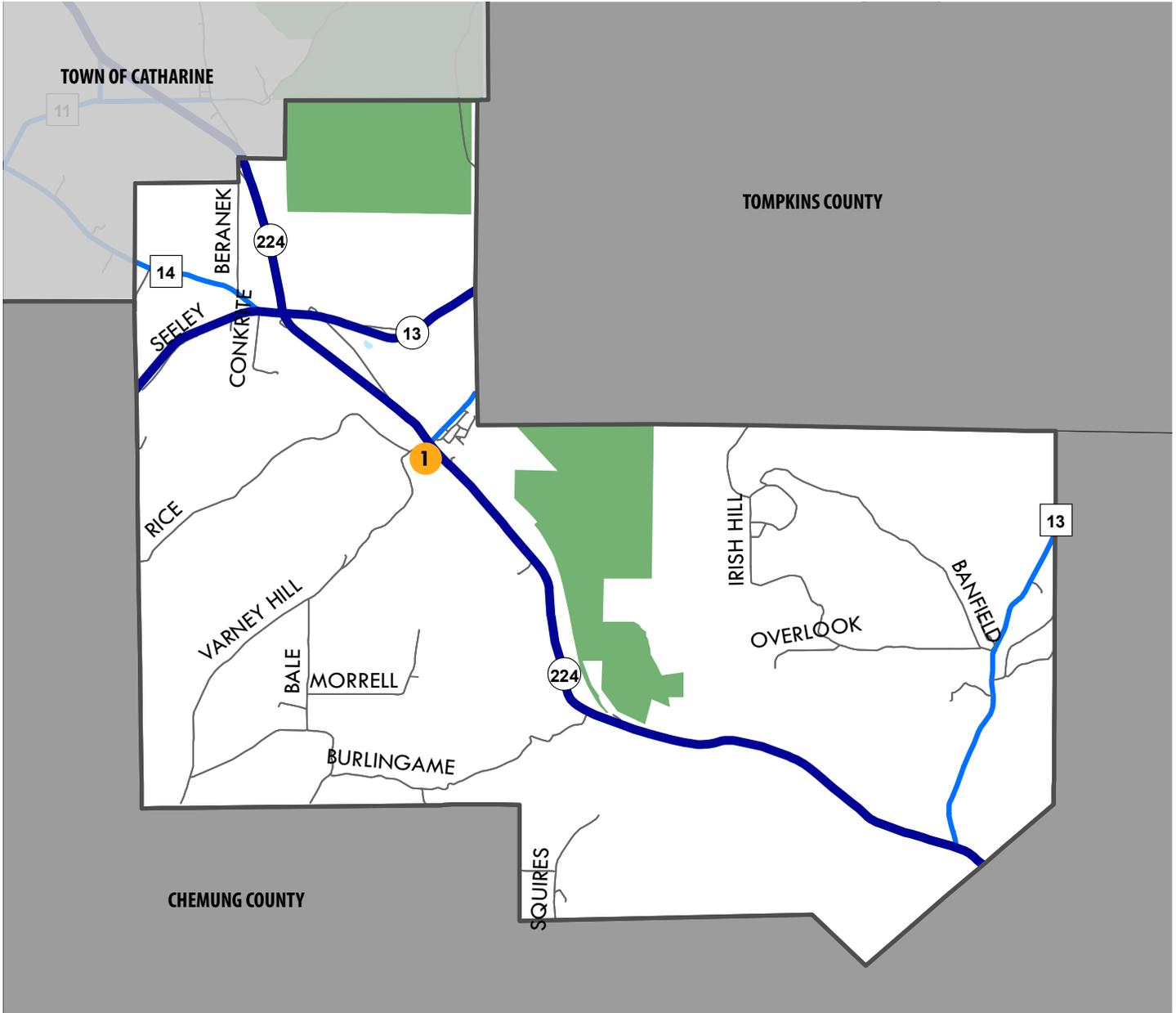
Captain Gabriel Ogde arrived in the Town of Cayuta in 1798. He was the first to operate a tavern in the Town. However, since major routes to several market and shipping areas passed through Cayuta, over time a half dozen taverns opened to accommodate the men driving livestock through. Also in 1798, Reverend David Jaynes, who was believed to be the first resident pastor in the County, became a resident of Cayuta. The post office was established in 1815. The boundaries of the Town were altered considerably during its incorporation with Schuyler County in 1824.

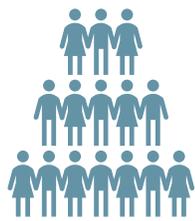


The largest industry in Cayuta today is Wagner Hardwoods, the third largest sawmill in the state. Much of the early economic activity in the County revolved around the lumber industry, and Cayuta’s lumberyard is one of the only enterprises that has maintained a presence in the region. Economic development initiatives that benefit the existing industries in the Town will be critical to maintaining infrastructure and services. Cayuta would like to protect its rural character and natural resources while pursuing such opportunities. For example, residents at public input sessions voiced concerns about agricultural runoff pollution of their water wells due to the close proximity of farm fields. In order to maintain current conditions, Cayuta will need to create a plan for preserving and protecting the quality of accessible groundwater and its other natural resources.

[TOWN OF CAYUTA]

FIGURE 31: Town of Cayuta Critical Facilities



					
<p>LAND AREA Land: 20.3 sq/mi Water: 0.0sq/mi Density: 25 people/sq mi</p>	<p>POPULATION 2020: 508 [-8.6% Change] 2010: 556 Median Age: 46.8</p>	<p>MEDIAN HOUSEHOLD INCOME \$41,595</p>	<p>MEDIAN HOME VALUE \$85,800</p>	<p>POVERTY RATE 19.2%</p>	<p>EMPLOYMENT RATE 58.3%</p> <p>Average Commute 25.5 mins</p>

|TOWN OF CAYUTA|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	6360 State Route 224, Cayuta, NY 14824	No	No
1	Highway Department	6360 State Route 224, Cayuta, NY 14824	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Cayuta does not have any designated emergency evacuation routes but State Route 224 and 13 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Cayuta has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Cayuta has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to determine and set up suitable locations.

Permanent Housing

The Town of Cayuta recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Cayuta does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

[TOWN OF CAYUTA]

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Cayuta and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	No	-	-
Zoning Code	No	-	-
Subdivision Regulations	No	-	-
Site Plan Review	No	-	-
Flood Damage Prevention Law	Yes	06/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Cayuta.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	No	
Environmental Board/ Commission	No	
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Cayuta.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital Improvements Project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

[TOWN OF CAYUTA]

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 31: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Cayuta	2	\$185,400	\$4,270

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

Cayuta's chief concern is also flooding, particularly in the lower terrain in the south west corner of town around the intersection of Varney Hill Road and Burlingame Road. An area of Varney Hill Road which washes over regularly during heavy rain is being addressed in the near future, however more flood mitigation is necessary. Two existing culverts, culvert #56 on Varney Hill Road and culvert #104 on Burlingame Road, both require upgrades to accommodate storm water volumes.

Low terrain in the south eastern side of Town along Decker Road, which is an access road to the Arnot Forest Area also sees repetitive flooding impact. Upgrading culvert #113 to a 12' box culvert is an ideal solution to handle the volume of water that passes through the valley.

Town of Cayuta roads see moderate use of logging trucks along its hilly terrain. The placement of guide rail, an estimated 1000' town-wide, would aid in limiting the impact of motor vehicle accidents.

TABLE 32: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Cayuta	6/6/2005	Thunderstorm Wind	\$ 10,000.00
Cayuta	7/9/2007	Thunderstorm Wind	-
Cayuta	7/10/2007	Thunderstorm Wind	-
Cayuta	7/20/2017	Thunderstorm Wind	\$ 1,000.00
Cayuta	8/18/2019	Thunderstorm Wind	\$ 10,000.00
Cayuta	8/18/2019	Thunderstorm Wind	\$ 5,000.00
Alpine	8/27/2020	Thunderstorm Wind	\$ 5,000.00
Cayuta	8/27/2020	Thunderstorm Wind	\$ 10,000.00

CHANGES IS DEVELOPMENT

The Town of Cayuta has not experienced significant changes in development, particularly in hazard-prone areas, and saw an almost 9% decrease in population between 2010 and 2020.

|TOWN OF CAYUTA|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	Town offices and the highway garage are the only identified critical infrastructure in the town aside from roadways.	Costs of full losses to the town office building or highway garage would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage if all equipment was inside.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
NATURAL RISKS			
Flooding	The majority of land use is forest and agricultural. There has been little new development in the town. The town has 73 parcels located within the 100 year floodplain, valued at less than \$13M, with some being commercial and residential but most forested.	There has been little significant flooding impact to Cayuta of real property. There is only one NFIP policy in force, with no historical claims. The most significant private damages would be to privately owned forested land and farm fields. Damages to roadways and drainage systems are the most significant concern, with potential damages ranging from minimal to several hundreds of thousands of dollars depending on the scope of impact. [per town highway superintendent]	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Severe Wind/ Tornado	The highest threat lies with mobile homes. The town records 48 mobile homes town-wide.	Little historical wind damage has occurred in the last 16 years. There has only been recorded property damages from thunderstorms in 2005 [~\$10,000 damage] and two instances in 2007 with negligible damages. Future potential damages are likely to remain under \$100,000 per occurrence. With the majority of land use as forest and agriculture, the greatest impacts of wind damage lie in blow down and crop damage. Mobile homes are still permitted within the town.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage. Key Issue: Continued reduction in mobile homes.

|TOWN OF CAYUTA|

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.	County-wide in the last 10 years there has only been \$5000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Given the lower population of Cayuta, damages are generally expected to be in the thousands for the town. Property damages and injuries associated with motor vehicle accidents are not included in these figures.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	Although there is some steep terrain in Cayuta, land subsistence would pose little threat to infrastructure.	\$0	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide. However, with less infrastructure in Cayuta, damages would likely be a low percentage of this.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Random damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. Most crops in Cayuta are planted annually, minimizing potential losses, although some losses may be realized.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF CAYUTA|

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Earthquake	Roads and municipal buildings	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture. Many agricultural areas in the town are located in floodplain areas, which generally makes those areas less susceptible to drought conditions.	While agriculture is a significant industry in Cayuta, high value crops are limited.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Forested areas and crop fields.	Terrain and vegetation types significantly limit the inception, spread, and damages of wildfire, as demonstrated by the lack of historic occurrences. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings. No Zoning rules are in place applying minimum distances between structures which could minimize exposure and spread.	Due to low density, damages from structure fires are generally isolated. Losses are generally well under \$300,000.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF CAYUTA|

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and limited business and industry within the town.	Cyber attack is only likely to result in loss of data and computer hardware. There is no infrastructure to be damaged within the town from a cyber attack.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	State Routes 224 and 13 are most likely to carry hazardous materials through the town, although quantities are limited. Hazardous materials used in agriculture and logging, as well as propane and heating oil are common on local roads. A natural gas pipeline does cross the town south of NYS Route 13.	Due to the quantity and nature of materials, impacts are likely to be very localized to the incident site, including roadway damages and damages to nearby structures. Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town. Damages would be expected to be less than \$500,000, not including clean-up costs; although environmental impacts could far exceed this amount.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release- Fixed Site	Town highway garage and large farms.	Damages could range as high as several hundred thousand dollars in extreme cases.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building or a local business.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage

|TOWN OF CAYUTA|

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Pandemic	The town's small population density can contribute to social distancing and limit exposure.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	State Routes 224 and 13 provide the highest risk for a significant transportation accident, although traffic on these state routes is generally not heavy.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Biological Agent Release	No identified susceptibility.	Not likely to impact any structures in the town.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The town offices and local businesses are likely to be the only targets of such an attack	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The town offices and local businesses are likely to be the only targets of such an attack	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.

|TOWN OF CAYUTA|

TABLE 33: Town of Cayuta Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Animal Disease	Local agriculture.	With several milking operations in the town, the most significant disease concern is for cows. A catastrophic disease outbreak would result in several hundreds of thousands of dollars in immediate losses, with even greater long-term losses.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, businesses.	Limited	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Town municipal buildings, businesses, farms.	Most businesses and farms have generators, limiting losses.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most.	Unlikely - Event is probable in the next ten years, with a limited severity impact Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.

[TOWN OF CAYUTA]

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Cayuta. The hazard mitigation goals for Schuyler County and the Town of Cayuta are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

|TOWN OF CAYUTA|

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Cayuta, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF CAYUTA				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE HIGHWAY GARAGE				
Project Number	A.1.7.h			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	All, Critical Facilities			
Description of Problem	The Town of Cayuta Highway Garage does not currently have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 5 kw emergency generator for the Cayuta Highway Garage.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.	
Useful Life	15+ years			
Estimated Cost	Low < \$50,000			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Cayuta Highway Department			
Coordinating Agencies	Town of Cayuta Government, Schuyler County Emergency Management			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	\$50,000 - \$99,999	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	< \$50,000	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: TOWN OF CAYUTA				
PROJECT NAME: REPLACE AND UPGRADE CULVERT #56 ON VARNEY ROAD				
Project Number	B.1.3.p			
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	Culvert #56 on Varney Hill Road has failed and continually leads to flooding across the road.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Replace and Upgrade culvert #56 on Varney Hill Road with a 4'x6' box culvert in the Town of Cayuta.			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Medium - Will enlarge and strengthen the passage of water under Varney Hill Road, by raising the road and allowing better passage of water during flooding.	
Useful Life	25+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Cayuta Highway Department			
Coordinating Agencies	Schuyler County Soil and Water Conservation District			
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - 2025	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Replace culvert #56 on Varney Hill Road	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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|TOWN OF DIX|

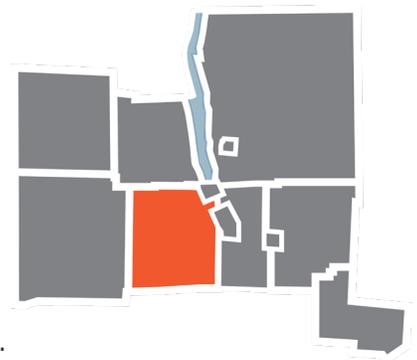
This section presents the jurisdictional annex for the Town of Dix. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Dix; an assessment of the Town of Dix’s risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Scott Yaw	Address: 2305 County Route 17, Watkins Glen, NY 14891 Phone: [607] 535-7467 Cell: [607] 425-6362 Email: Dixtownhighway@townofdix.com
Code Enforcement Officer Dennis Tremblay	Address: 304 7th Street, Watkins Glen, NY 14891 Phone: [607] 535-7973 ext. 205 Cell: [607] 425-6351 Email: CEO@townofdix.com
Town Supervisor Dominic Smith	Address: 304 7th Street, Watkins Glen, NY 14891 Phone: [607] 535-7973 Cell: [607-857-3471] Email: DSmith@townofdix.com

TOWN PROFILE

The Town of Dix is central to Schuyler County not only geographically, but also in regional significance. Dix shares borders with the Town of Reading to the north, the Town of Orange to the west, Chemung County to the south, and the Town of Montour to the east. The Villages of Montour Falls and Watkins Glen also are partially located within the Town of Dix, as they cross the Town’s borders to the northeast. Dix is home to the County seat, whose office is located within the Village of Watkins Glen. The Town also boasts two famous assets of Schuyler County, the Watkins Glen International Speedway and Watkins Glen State Park. Town of Dix is governed by an elected Supervisor and a four-person Town Board.

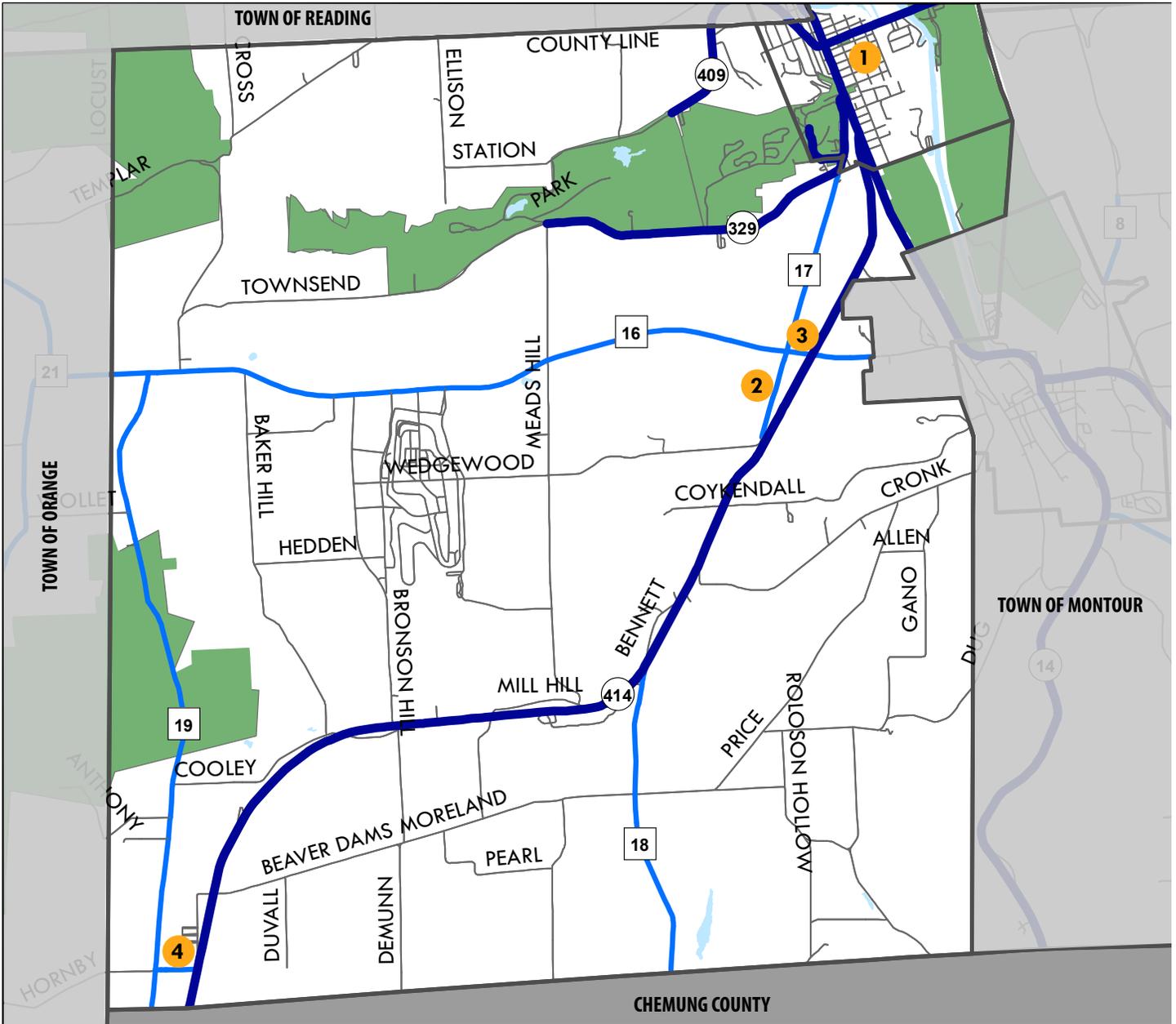


The first residents came to Dix in 1797. John Diven and William Baskin moved with their families to Dix, choosing to settle in the hill area above what is presently called Watkins Glen. About the same time, David Culver settled near what is now the entrance of Watkins Glen State Park. Culver was instrumental in developing this area of the Town, as he was responsible for improving the road and setting up a tollgate. For a time, this settlement was named Culverstown in his honor.

Today, the presence of WGI in Dix still brings thousands of visitors every year from across the country, giving the Town an opportunity to reroute tourists to the area’s many natural attractions, wine trails, and fishing, as well as its historic village communities.

[TOWN OF DIX]

FIGURE 32: Town of Catharine Critical Facilities



<p>LAND AREA Land: 36.1 sq/mi Water: 0.5 sq/mi Density: 104 people/sq mi</p>	<p>POPULATION 2020: 3,757 <i>[-2.8% Change]</i> 2010: 3,864 Median Age: 45.9</p>	<p>MEDIAN HOUSEHOLD INCOME \$50,375</p>	<p>MEDIAN HOME VALUE \$123,300</p>	<p>POVERTY RATE 15.5%</p>	<p>EMPLOYMENT RATE 51.3%</p> <p>Average Commute 21.8 mins</p>

[TOWN OF DIX]

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	304 7th Street, Watkins Glen, NY 14891	No	No
2	Highway Department	2305 County Route 17, Watkins Glen, NY 14891	No	No
3	NYS DOT - Region 6 Office	3545 County Route 16, Watkins Glen, NY 14891	Yes	No
4	Beaver Dams Fire Department	1165 County Route 19, Beaver Dams, NY 14812	Yes	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Dix does not have any designated emergency evacuation routes but State Route 414 and County Route 16 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Dix has not identified sites for residents to shelter during emergencies or storm events. The Watkins Glen Central School District located within the Village of Watkins Glen has been identified as a potential shelter and could accommodate residents within the Town of Dix. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Dix has identified one site for temporary housing placement for residents displaced by a disaster.

- Schuyler County Business Park [2141 State Route 414, Town of Dix]. This central area would be Schuyler County's primary site for temporary emergency housing. The site currently has one 30,000SF building on approximately 14 acres, leaving 33.8 acres to accommodate emergency housing. This site is well above the 500 year floodplain, and has road access to water, sewer, and electricity. The rear of the site is also accessible by rail. Accounting for access roads and a small pond, the site should be suitable for approximately 305 housing units, using USACE estimates [9 units per acre].

In the event temporary housing is needed, the Town will work with the County to determine and set up suitable locations.

Permanent Housing

The Town of Dix recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Dix does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|TOWN OF DIX|

CAPABILITIES ASSESSMENT PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Dix and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	2001	Town Board/ Planning Board
Zoning Code	Yes	2/2016	Planning Board/ Zoning Board of Appeals
Subdivision Regulations	Yes	2/2016	Planning Board
Site Plan Review	Yes	2/2016	Planning Board
Flood Damage Prevention Law	Yes	2/2016	Code Enforcement Officer/ Planning Board

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Dix

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	Participate on County Environmental Management Council
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Dix.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE[YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|TOWN OF DIX|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 34 NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Dix	1	\$70,000	\$269

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The town’s greatest hazard of concern is flooding, although this tends to occur in limited areas around the town. These areas are primarily the Beaver Dams area in the south western corner of town and along the creeks that flow into Watkins Glen and Montour Falls. Areas along Vanzandt Hollow Road and Cronk Road require stream bank reinforcement to prevent against fluvial erosion. The Town is also seeking funds for a new excavator which would be largely used for projects such as road and ditch maintenance and other flood control work.

TABLE 35: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
South Portion of County	7/22/2003	Flash Flood	\$ 3,000,000.00
Beaver Dams [Dix]	4/2/2005	Flash Flood	\$ 50,000.00
Wedgewood [Dix]	9/7/2011	Flash Flood	\$ 10,000.00
Beaver Dams	8/25/2007	Thunderstorm Wind	\$ 1,000.00
Beaver Dams	6/18/2017	Thunderstorm Wind	\$ 8,000.00

Description of Past Occurrences

- July 22, 2003 – Nearly stationary thunderstorms dumped between 2 and 3 inches of rain in less than 3 hours across the southern half of Schuyler County. Two-day rainfall totals were 3 and 6 inches. The heaviest rain fell across Monterey, Townsend, Montour Falls, Beaver Dams, Watkins Glen, and Odessa. The heavy rain caused flash flooding that closed many roads, and created several mudslides. In the Town of Dix, just west of Watkins Glen International Speedway, a bridge was washed out on County Route 16. Estimated property damage: \$3 million.
- April 2-3, 2005, Beaver Dams – A slow moving storm from the Ohio Valley brought 1 to 4 inches of rain over two days. Before this storm, streams had high flows due to a previous rainstorm and snowmelt. There were some road closures and flooded basements. A few streams and creeks came out of their banks. Estimated property damage: \$50,000.
- September 7-8, 2011 – Remnants of Tropical Storm Lee with heavy rain caused minor flooding in the western side of Schuyler County. Road flooding was reported on State Route 14 between Watkins Glen and Montour Falls. One lane is covered for about 100 feet. Several homes in Odessa, Mecklenburg, Burdett, and Montour Falls had to have their basements de-watered. One resident of the village of Odessa was electrocuted in her basement as she attempted to operate the basement sump-pump.

CHANGES IS DEVELOPMENT

Most of the development within the Town of Dix has been along the Route 414 corridor and County Rt 16. This development includes small businesses and solar development. The Town has also invested in its infrastructure and road systems to make them more climate resilient.

|TOWN OF DIX|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>In addition to the town offices and the highway garage, the town also maintains a municipal water system which could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads, bridges, and rail are also at risk.</p>	<p>Costs of full losses to the town office building or highway garage would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage if all equipment was inside.</p> <p>The Town maintains a small municipal water system, which provides for a small number residents and the Watkins Glen International Speedway. The Speedway does have its own water supply, though, should the town system [which is only about 8 years old] fail.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>The town has 140 parcels located within the 100 year floodplain, valued at over \$21M, with most being agricultural, but some being residential and commercial.</p> <p>The topography of streams and creeks through the town leads to a tendency of flash flooding in these basins. While improvements and updates have been made, many road bases and drainage systems are old and inadequate for this threat.</p> <p>Of significant concern are three dams, identified as high hazards by NYS DEC. All three are owned by NYS OPRHP.</p>	<p>Dix has experienced some of the highest degree of flooding in Schuyler County. Storms in 2003, 2005, 2011, and 2013 have resulted in over \$3M in damages in areas of Dix, including the hamlets of Beaver Dams and Townsend. The highest damages came in 2003 from a washed out bridge on County Route 16 near the WGI.</p> <p>Dix has some of the county's strongest zoning and codes, with restrictions on development in floodplains. A large amount of area within the town is used agriculturally. These contribute to minimizing the impacts of flooding on private property.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range from several hundreds of thousands of dollars in damages to a few million.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. The town records 113 mobile homes as the primary structure on a property, including those within the five parks within the town.</p> <p>There is concern over the impact of severe winds to the Watkins Glen International Speedway, as the terrain surrounding the speedway is generally open, with little to buffer or shelter the speedway or attendees from a storm.</p> <p>While the majority of land use in the town is residential, the higher acreage of lots tends to trend toward large trees being positioned away from structures, which can reduce damages from blow down. Mobile homes are still permitted within the town.</p>	<p>The open terrain of the Town of Dix fosters above average winds, which is being embraced as the town explores the use of wind power.</p> <p>Despite these higher winds, little historical wind damage has occurred in the last 16 years, with a few instances of minor property damage, typically due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.</p>	<p>County-wide in the last 10 years there has only been \$5000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. With the higher population of the Town of Dix, damages could exceed \$100,000 in a severe event. Property damages and injuries associated with motor vehicle accidents are not included in these figures.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Landslide	<p>None.</p>	<p>\$0</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF DIX|

TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide. The higher population density of the Town of Dix could indicate a higher portion of damages potentially within the town.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Random damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. Hay is a popular crop in Dix. Once mature, hay is fairly resilient to changes in temperature.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads, municipal buildings, and the Watkins Glen International Speedway would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture. Hay is a predominant crop in Dix, which is generally drought tolerant.	While agriculture is a significant industry in Dix, high value crops are limited.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF DIX|

TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Wildfire	Forested areas and crop fields. While some grass fires have occurred, their area of impact is limited and easily contained. The terrain limits inception and spread of wildfire, making any that do start easy to contain.	Terrain and vegetation types significantly limit the inception, spread, and damages of wildfire, as demonstrated by the lack of historic occurrences. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings, business and industry, Watkins Glen International Speedway. The higher population density along transportation corridors and near the villages can increase the risk of a major fire. Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.	In 2007, the Glen Club within the Watkins Glen International Speedway was destroyed by a fire. While the incident was largely contained, most fire departments in the county aided in the response. Minimum distances between structures enforced through zoning and codes assists in controlling the spread of structural fires. Losses, still, could be as high as several million dollars, depending in the structures impacted.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and limited business and industry within the town.	Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyber attack, technology utilized to control speedway operations and communications could be susceptible to attack..	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	<p>State Routes 414 and 14 are most likely to carry hazardous materials through the town and the villages. State Route 14 is the most significant roadway that traverses the county. Running along the western side of Seneca Lake, a number of goods are transported between the New York State Thruway [I-90] to the north and I-86 to the south.</p> <p>Active rail lines, including the Norfolk Southern which traverses through much of the town, and the Finger Lakes Rail line which extends from the western shore of Seneca Lake and passes through both villages [see Figure 8], also carry a variety of materials.</p> <p>In addition to materials moving through the county on Route 14 and by rail, hazardous materials used in agriculture and for the Speedway, as well as propane and heating oil are common on local roads. Natural gas and LPG pipelines travel through the middle of the town longitudinally, with branches accessing the villages</p>	<p>The larger quantities of hazardous materials transported along Route 14 and by rail, as well as the increased frequency of transportation of materials on these routes, lead to a higher threat and impact to the Town of Dix along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lead to a higher potential for loss of life and damages.</p> <p>Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount.</p>	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.

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TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release- Fixed Site	Town municipal buildings, business and industry, Watkins Glen International Speedway.	Damages could range as high as several hundred thousand dollars in extreme cases. Impacts are of greater concern in more populated areas, such as industrial areas and the Watkins Glen International Speedway.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building, a local business, or the mass gathering areas of the Watkins Glen International Speedway, or the Watkins Glen State Park.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal. At a mass gathering site, such as the Watkins Glen International Speedway or the Watkins Glen State Park, the impacts are potentially higher with a likely increase in injuries and fatalities.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The Town's higher population density coupled with attractions such as the Watkins Glen International Speedway and the Watkins Glen State Park, which both draw international patrons, make the town more susceptible to being impacted by a pandemic.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses due to productivity can be higher in the Town of Dix, particularly due to attractions and mass gathering areas being shut down to prevent further spread of disease. This can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along State Route 14, State Route 414, and the rail lines that cross the town are of significant concern. An accident along even secondary roads leading away from the Watkins Glen International Speedway can impact egress and evacuation from the facility.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The greatest risk of a biological agent is in the mass gathering sites of the Watkins Glen International Speedway and the Watkins Glen State Park.	While not likely to directly impact any structures in the town, a biological agent release, especially in a mass gathering situation, could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The Town offices, local businesses, and the mass gathering sites of the Watkins Glen International Speedway and the Watkins Glen State Park would have the highest threat and impact from an IED	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages. Mass gathering locations could see injuries and losses of life in the dozens.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The town offices, local businesses, and the mass gathering sites of the Watkins Glen International Speedway and the Watkins Glen State Park would have the highest threat and impact from an RDD	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination. Mass gathering locations could see injuries and contamination numbering in the dozens to hundreds, although deaths are likely to be lower.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Local agriculture.	With several large milking operations in the town, the most significant disease concern is for cows. A catastrophic disease outbreak would result in several hundreds of thousands of dollars in immediate losses, with even greater long-term losses.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, business and industry, including Watkins Glen International Speedway.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 36: Town of Dix Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Sustained Power Outage	Town municipal buildings, business and industry, Watkins Glen International Speedway.	Most structures have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings, Watkins Glen International Speedway	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most. Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Dix. The hazard mitigation goals for Schuyler County and the Town of Dix are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

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When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Dix, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF DIX				
PROJECT NAME: CULVERT UPGRADE AND REPLACEMENT ON WHITES HOLLOW ROAD				
Project Number	B.1.3.q			
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K			
Project Category [POETE]	Planning and Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	Whites Hollow Road in the State Park needs to be raised to allow for new culverts to be established and to give a proper grade so the existing draining system has a place to drain. Currently the drainage ditches and cross culverts have no place to drain. Many of the culverts have no outlets at all. Any significant storm event is causing flooding of the road system and sedimentation to the gorge itself. Stabilization of the streambank on the north west bank above the bridge is also necessary to protect the road.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Raise Whites Hollow Rd to allow for a new larger culverts to be established and change the grade so the stormwater drainage system has a place to drain.			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Low - Reduction in flood damage by addressing local roadway drainage and stormwater management issues.	
Useful Life	25+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Dix Highway Department			
Coordinating Agencies	Schuyler County Soil and Water Conservation District			
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025	
Estimated Time Required for Project Implementation	2-3 months	Project Funding Sources	County and Local Budgets	
Local Planning Mechanisms to be used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Raise Whites Hollow Rd and install new culverts	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: TOWN OF DIX			
PROJECT NAME: CULVERT UPGRADE AND REPLACEMENT ON STATION ROAD			
Project Number	B.1.3.r		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The cross culvert on Station Road just east of Whites Hollow Road is undersized and the outlet has a near 20 foot vertical erosion that directly discharges to the state park.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace cross culvert on Station Road just east of Whites Hollow Road with a larger culvert and repair erosion.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Reduction in flood damage by addressing local roadway drainage and stormwater management issues.
Useful Life	25+ years		
Estimated Cost	Low < \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Dix Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - 2025
Estimated Time Required for Project Implementation	2-3 months	Project Funding Sources	County and Local Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace cross culvert on Station Road east of Whites Hollow Rd	< \$50,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|TOWN OF DIX|

JURISDICTION: TOWN OF DIX			
PROJECT NAME: PURCHASE EXCAVATOR FOR DITCH MAINTENANCE			
Project Number	B.1.3.s		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	All		
Description of Problem	Current excavator equipment is in disrepair and will soon end its useful service.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Purchase of new excavator for road and ditch maintenance and other routine and emergency flood control work.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - Having equipment available for the Town and other jurisdictions will reduce overall costs and facilitate timely completion of projects with the right equipment.
Useful Life	15+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Dix Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024
Estimated Time Required for Project Implementation	One time procurement	Project Funding Sources	County and Local Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue to borrow or rent equipment	< \$50,000	Not Recommended - Equipment has limited availability in Schuyler County, making borrowing equipment for both routine and emergency work untimely.
	Purchase of new excavator	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

TOWN OF HECTOR

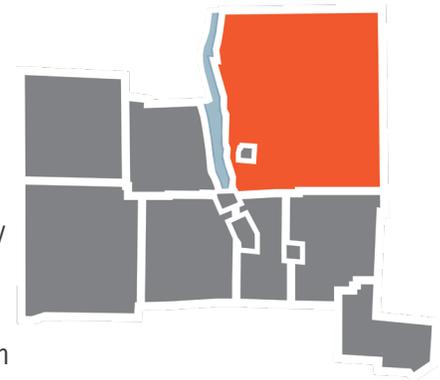
This section presents the jurisdictional annex for the Town of Hector. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Hector; an assessment of the Town of Hector's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Randy Rappleye	Address: 5097 State Route 227, Burdett, NY 14818 Phone: [607] 546-5286 Ext 232 Email: highway@hectorny.us
Code Enforcement Officer Jason Santobianco	Address: 5097 State Route 227, Burdett, NY 14818 Phone:[607] 546-5286 Ext 227 Cell: [607] 731-0357 Email: codes@hectorny.us
Town Supervisor Justin Boyette	Address: 5097 State Route 227, Burdett, NY 14818 Phone: [607] 546-5286 Ext 225 Email: supervisor@hectorny.us

TOWN PROFILE

Located in the northeastern corner of Schuyler County, the Town of Hector is bordered by the Town of Reading [The town of Hector boundary extends across Seneca Lake to the western shoreline], Seneca County to the north, Tompkins County to the east, and the Towns of Montour and Catharine to the south. Hector's geographical location is known for its healthy soil and lush vegetation. Additionally, the Town contains the only national forest in New York State and has the longest stretch of Seneca Lake coastline in the County. Hector also boasts world-famous wineries and an innovative distillery lining a scenic byway that provides elevated views over Seneca Lake's waters from its edge. Town of Hector is governed by an elected Supervisor and a five-person Town Board.

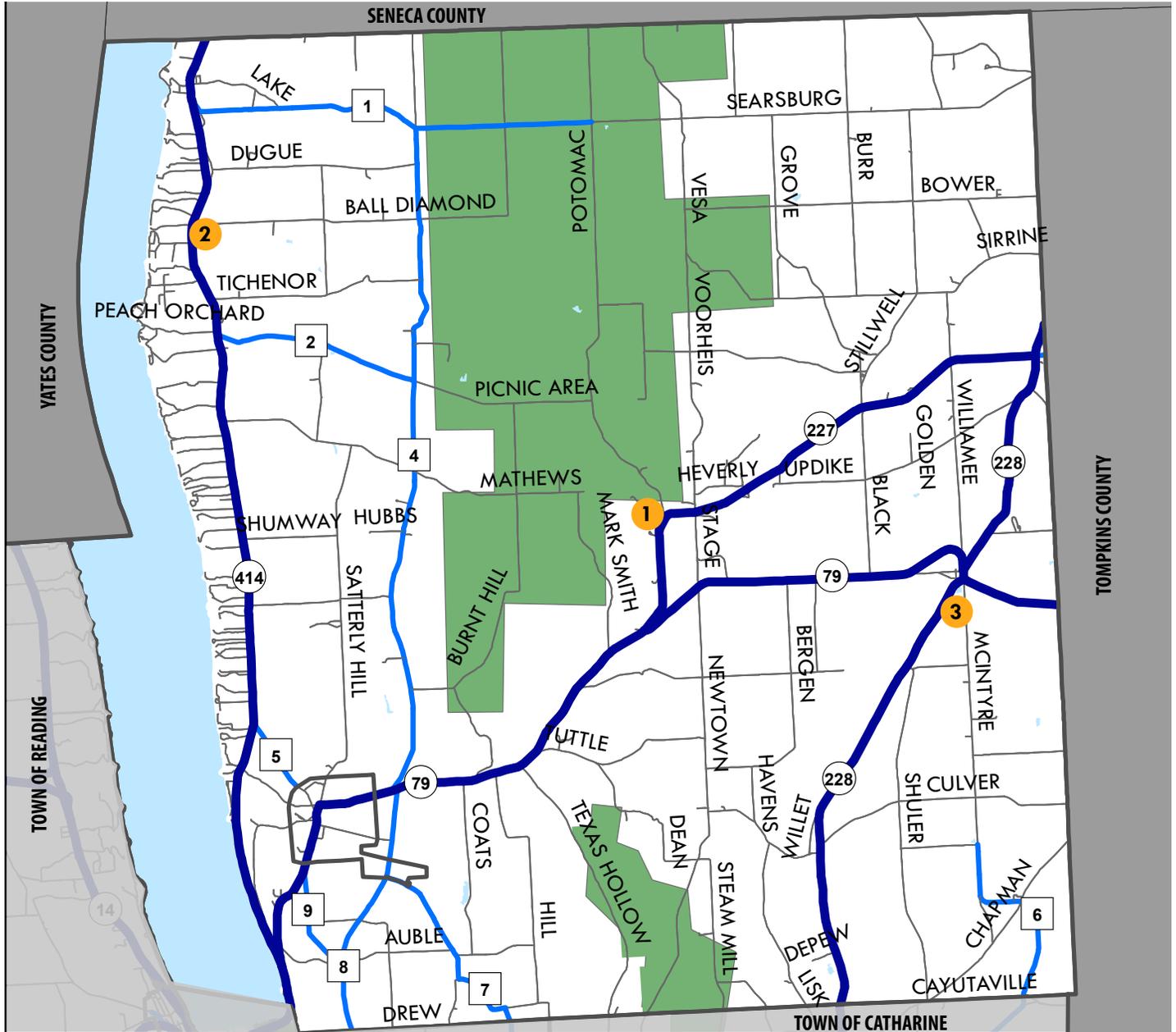


The first settlers came to Hector in 1790, the Town was formed in 1802, making the Town of Hector the second oldest municipality in the County. Historically, Revolutionary War veterans sought settlement in Hector as part of the Central New York Military Tract, having come upon the land during a northern offensive against Native Americans sympathetic to England. The military tract granted parcels of land to veterans wanting to return to the area. It was these same veterans who became Hector's founders, seeking to enjoy the natural beauty and resources that the Iroquois had before them.

Hector has many resources that will ensure a prosperous future. Hector is intent on maintaining the value of its natural assets while still developing its booming agricultural businesses with sustainable and modern practices.

[TOWN OF HECTOR]

FIGURE 33: Town of Hector Critical Facilities



<p>LAND AREA Land: 102.5 sq/mi Water: 10 sq/mi Density: 48 people/sq mi</p>	<p>POPULATION 2020: 4,895 <i>[-0.9% Change]</i> 2010: 4,940 Median Age: 48.2</p>	<p>MEDIAN HOUSEHOLD INCOME \$61,477</p>	<p>MEDIAN HOME VALUE \$169,400</p>	<p>POVERTY RATE 13.3%</p>	<p>EMPLOYMENT RATE 60.2%</p> <p>Average Commute: 30.0 mins</p>

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CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	5097 State Route 227, Burdett, NY 14818	No	No
1	Highway Department	5097 State Route 227, Burdett, NY 14818	No	No
2	Valois-Logan-Hector Fire Department	5736 State Route 414, Hector, NY 14841	No	No
3	Mecklenburg Fire Department	4495 County Route 6, Mecklenburg, NY 14863	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Hector does not have any designated emergency evacuation routes but State Route 414 and 79 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Hector has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Hector has identified one site for the placement of temporary housing for residents displaced by a disaster.

- In eastern Schuyler County, an area has been identified for use behind Valois-Logan-Hector Fire Station at 5736 State Route 414 in Hector. This area is above the floodplain and has road access to water and electric. At approximately 9 acres, the site could accommodate about 80 housing units.

In the event temporary housing is needed, the Town will work with the County to determine and set up suitable locations.

Permanent Housing

The Town of Hector recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Hector does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

TOWN OF HECTOR

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Hector and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	09/2015	Town Board
Zoning Code	No	-	-
Subdivision Regulations	No	-	-
Site Plan Review	No	-	-
Flood Damage Prevention Law	Yes	01/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Hector.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	No	Working on creating a Planning Board
Environmental Board/ Commission	Yes	Hector Sustainability Committee and Participates on County Environmental Management Council.
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Hector.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital Improvements Project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

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NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 38: NFIP Policy Statistics for Town of Hector [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Hector	18	\$4,897,000	\$9,218

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

Hector, like elsewhere in Schuyler County, holds flooding as their largest concern. With assistance from the Schuyler County Soil and Water Conservation District, the Hector Highway Department has been armoring ditches in key locations around the town which experience the greatest water volume. The only project identified by the town is the need for a box culvert on Hickey Road, which leads to a single residence. The current culvert frequently washes over during heavy rain.

TABLE 39: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Beaver Dams [Dix]	8/9/2013	Flash Flood	\$ 50,000.00
Hector	8/14/2018	Flash Flood	\$75,000.00
Mecklenburg	9/29/2005	Thunderstorm Wind	\$ 1,000.00
Reynoldsville	7/17/2008	Thunderstorm Wind	\$ -
Hector	7/25/2011	Thunderstorm Wind	\$ -
Hector	8/16/2016	Thunderstorm Wind	\$ 2,000.00
Reynoldsville	6/18/2017	Thunderstorm Wind	\$ 4,000.00
Hector	6/13/2018	Thunderstorm Wind	\$ 15,000.00

Description of Past Occurrences

- August 9, 2013 – Thunderstorms with heavy rain caused flash flooding, causing short term road closures. Two trailers in The Town of Hector had to be evacuated causing property damage estimated at \$50,000.
- August 14, 2018 - Several rounds of heavy rain producing thunderstorms which caused severe flash flooding and major damages in several locations. Many roads flooded and damaged by severe flash flooding throughout the County. In the Town of Hector people were trapped in homes and required rescuing.

CHANGES IS DEVELOPMENT

The Town of Hector has experienced significant development along the NYS Rt 414 corridor, particularly wineries, breweries, and tourism-related businesses since the last update. There have also been many small cabin-style housing development projects that have been constructed that are being used as long-term housing and as seasonal rentals. With assistance from the County and Schuyler County Soil and Water Conservation District, the Town has made investments in addressing stormwater runoff and storm event flooding, which has increased the overall resiliency of many of the flood-prone areas of the town. There has been significant new development of large lake properties along Seneca Lake, many of which are on seasonal roads. Additionally, since COVID, there has been an increase in the usage of these lakefront properties. This increase in the usage of these properties has not resulted in a change or increase in the risk of flooding or storm damage. However, it has increased the density of residents who could need emergency services in this area should a storm event occur.

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HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>In addition to the town offices and the highway garage, the town also maintains a municipal water system which could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads and bridges are also at risk.</p>	<p>Costs of full losses to the town office building or highway garage would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage if all equipment was inside.</p> <p>The Hector Burdett Water District services over 1200 customers within the Village of Burdett and along parts of Route 414. Along with providing potable water, it also supplies several fire hydrants. Impacts from failure of the water system would be limited.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Within the Town of Hector, there are 177 parcels within the 100 year floodplain, valued at over \$38M. The majority of these lie within the Taughannock Creek basin, a mix of agriculture and residential land use. No municipal buildings are within the floodplain.</p> <p>Many larger properties are being subdivided and sold, resulting in more property owners to coordinate with regarding drainage on private property. In 2015 a farm clear cut 60 acres for the development of a new winery, causing the significant storm water runoff issues.</p> <p>The topography of streams and creeks through the town leads to a tendency of flash flooding in these basins. While improvements and updates have been made, many road bases and drainage systems are old and inadequate for this threat.</p>	<p>With drainage primarily in the Seneca Lake and Taughannock Creek watersheds, flood waters are generally quick to dissipate but move swiftly, causing damage to private property and infrastructure. There were damages to roadways in July of 2013 as well as damages to roads private structures in June of 2015. In August of 2013, heavy rains caused evacuation and destruction of two mobile homes and resulted in damages estimated at \$50,000.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range from several hundreds of thousands of dollars in damages to a few million</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Hector has the highest number of mobile homes in the county at 352 as the primary structure on a property, including those within the three parks within the town.</p> <p>Although Hector is the highest populated town in the County, its population density is still under 50 persons per square mile, limiting localized damages. Agriculture and forested land are the greatest land uses in the town, although agriculture losses could be significant from a storm, particularly with hail. Mobile homes are still permitted within the town.</p>	<p>Little historical wind damage has occurred in the last 16 years, with a few instances of minor property damage, typically due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines</p>	<p>County-wide in the last 10 years there has only been \$5000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. With the higher population of the Town of Hector, damages could exceed \$100,000 in a severe event. Property damages and injuries associated with motor vehicle accidents are not included in these figures.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Landslide	<p>The steep slopes along the shore of Seneca Lake and the eastern side of Finger Lakes National Forest are rated at a moderate incidence for landslide [see figure 24]. This could impact some local roads and the lower portion of Route 414 north of Watkins Glen.</p>	<p>Despite the mildly elevated risk, no significant landslides have occurred in Schuyler County. Damages to roadways in a potential incident, however, could result in several hundreds of thousands of dollars in damages.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Damages from water line freeze and crop damage. The microclimates along the shores of the Finger Lakes provide ideal growing temperatures and humidity for grapes. The lakes tend to keep temperatures and humidity within acceptable ranges for each season, but significant swings in temperature could result in severe crop damages.	Water line freeze damage would be isolated and minimal. Agricultural damages, specifically those to grape vines, represent the most significant potential for damages, which could range upward of hundreds of thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads and municipal buildings would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture. Grape crops can be susceptible to drought damages, although many growers have access to irrigation systems.	Grapes are a higher value crop that could suffer significant damages ranging into the hundreds of thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Wildfire	Forested areas and crop fields.	There have been no significant historical occurrences of wildfire in Hector. Their area of impact is limited and easily contained, although some terrain can make access to fire areas difficult. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings and businesses. The higher population density along transportation corridors and near the village can increase the risk of a major fire.	The low population density helps prevent the spread of major fires. Losses are likely to range below \$500,000.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and business within the town.	Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyber attack, technology utilized to control business operations and communications could be susceptible to attack.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	<p>State Routes 414 and 79 are most likely to carry hazardous materials through the town. Running along the eastern side of Seneca Lake, Route 414 sees a number of goods transported from Watkins Glen and north through Lodi to Route 20. Although traffic on Route 414 is generally not as heavy as that on Route 14 on the western side of Seneca Lake, 414 still services a number residents and businesses and is an important connection on the eastern side of Seneca lake.</p> <p>Route 79 runs east/west connecting Watkins Glen with Ithaca, through the Village of Burdett and the hamlet of Mecklenburg.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p> <p>In addition to materials moving through the county, hazardous materials used in agriculture, as well as propane and heating oil are common on local roads.</p>	<p>The larger quantities of hazardous materials transported along Routes 414 and 79 lead to a higher threat and impact to the Town of Hector along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release- Fixed Site	Town highway garage and large farms.	Damages could range as high as several hundred thousand dollars in extreme cases. Adherence to safety measures decreases risk.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	The higher frequency of mass gathering events at locations such as wineries make the town more susceptible to being impacted by a pandemic.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal. At a mass gathering event, the impacts are potentially higher with a likely increase in injuries and fatalities.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The higher frequency of mass gathering events at locations such as wineries make the town more susceptible to being impacted by a pandemic.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses due to productivity can be higher in the Town of Hector, particularly due to businesses and events being shut down to prevent further spread of disease. This can have a significant impact on the local economy	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along State Route 414 and State Route 79 are of significant concern. The prevalence of wineries along Route 414 results in increased traffic, mostly on weekends and holidays.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The greatest risk of a biological agent release is at a mass gathering site.	While not likely to directly impact any structures in the town, a biological agent release, especially in a mass gathering situation, could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The town offices and local businesses would have the highest threat and impact from an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages. Mass gathering locations could see injuries and losses of life in the dozens.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The town offices and local businesses would have the highest threat and impact from an RDD.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination. Mass gathering locations could see injuries and contamination numbering in the dozens, although deaths are likely to be lower.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Local agriculture.	With several large milking operations and livestock herds in the town, the most significant disease concern is for cows. A catastrophic disease outbreak would result in several hundreds of thousands of dollars in immediate losses, with even greater long-term losses.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 40: Town of Hector - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Sustained Power Outage	Town municipal buildings, businesses, farms.	Some municipal structures have emergency power generation, which limits losses and impact	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most. Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Hector. The hazard mitigation goals for Schuyler County and the Town of Hector are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

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When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Hector, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF HECTOR				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE HIGHWAY GARAGE & TOWN HALL				
Project Number	A.1.7.i			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The Town of Hector Highway Garage and Town Hall do not have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Hector Highway Garage and Town Hall. Hector Town Hall is co-located with the highway garage and will benefit by an ability to maintain town government operations during a sustained power outage.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage	
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Responsible Organization	Town of Hector Highway Department			
Coordinating Agencies	Town of Hector Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	< \$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: TOWN OF HECTOR			
PROJECT NAME: REPLACE AND UPGRADE CULVERTS ALONG COUNTY ROAD 6			
Project Number	B.1.3.t		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The steel culvert at Hickey Road is failing and not large enough to accommodate stormwater runoff during large storm events.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace and upgrade the 4' steel culvert with a box culvert at Hickey Road		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - This project will enlarge and strengthen the passage of water under Hickey Road, allowing better passage of water during flooding, making flood water less prone to create damages to structures and undermine roadways.
Useful Life	25+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Responsible Organization	Town of Hector Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	1-2 months	Project Funding Sources	Hazard Mitigation Grants, FHwy Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace box culvert	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|TOWN OF HECTOR|

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TOWN OF MONTOUR

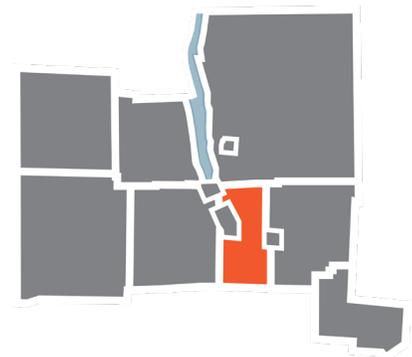
This section presents the jurisdictional annex for the Town of Montour. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Montour; an assessment of the Town of Montour's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Dana Bailey	Address: 135 Havana Glen Rd. Montour Falls, NY 14865 Phone: [607] 535-9372 Email: montourhighway@stny.rr.com
Code Enforcement Officer Rick Carroll	Address: 135 Havana Glen Rd. Montour Falls, NY 14865 Phone:[607] 535-9476 Email: mcode1@stny.rr.com
Town Supervisor David Scott	Address: 135 Havana Glen Rd. Montour Falls, NY 14865 Phone: [607] 535-9476 Email: mtownhall1@stny.rr.com

TOWN PROFILE

The Town of Montour is located in the south central area of Schuyler County. Montour shares a southern border with Chemung County, a northern border with the Town of Hector, an eastern border with the Town of Catharine and the Village of Odessa, and a western border with the Town of Dix and the Villages of Watkins Glen and Montour Falls. The Town is located in such a way that it accommodates a number of transportation routes into the center of the County. Route 14 provides direct access to US17/I-86 and serves as the main thoroughfare for both the Town and the Village of Montour Falls. Furthermore, Route 224 links the Village of Montour Falls to the Village of Odessa to the east. Town of Montour is governed by an elected Supervisor and a four-person Town Board.



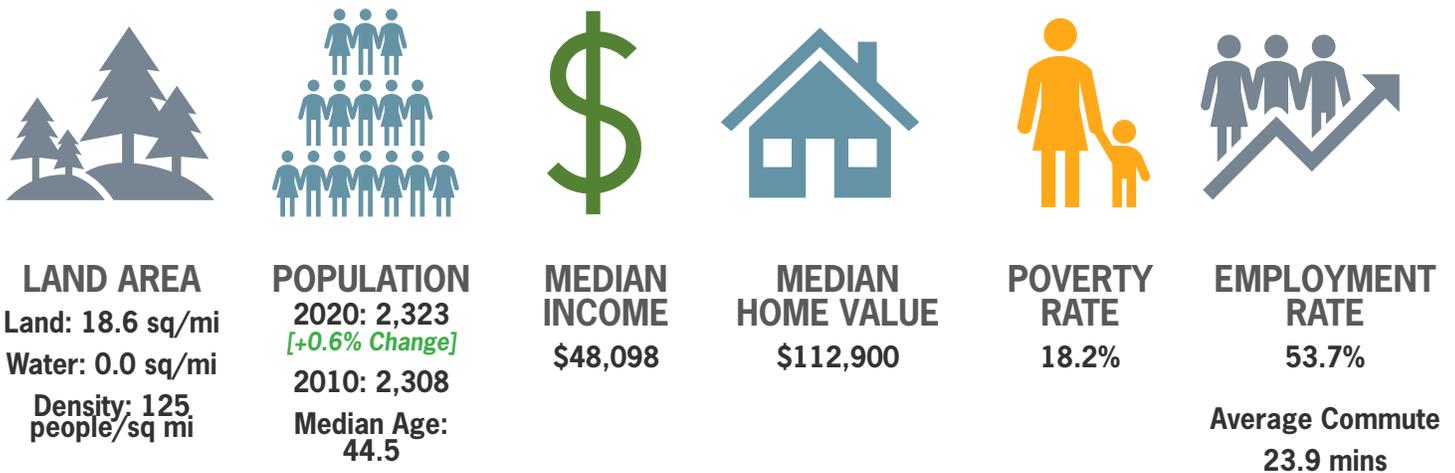
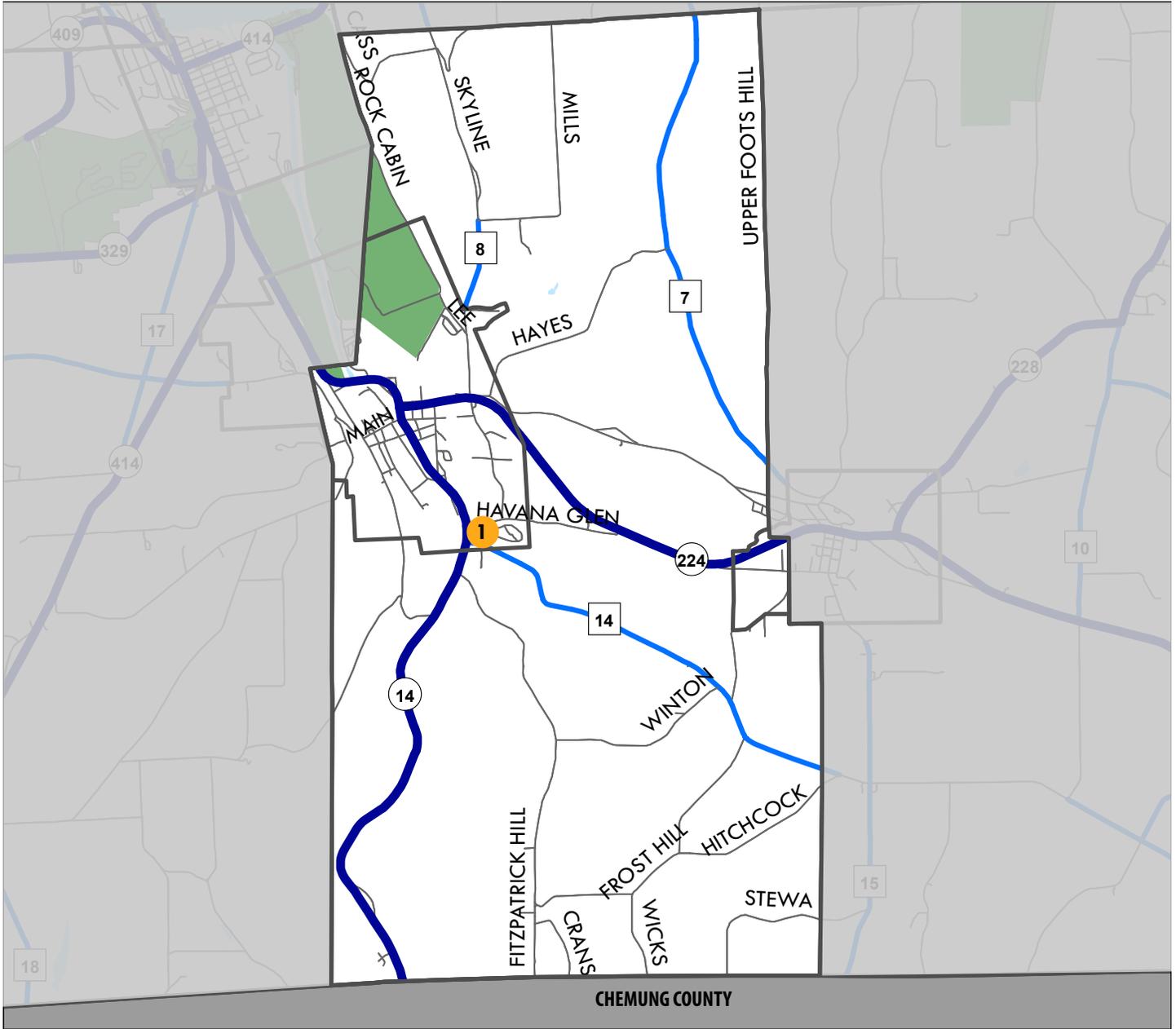
In 1860, the Town of Montour was established from a piece of the Town of Catharine. The first permanent settlers were Phineas Catlin, Silas Wolcott, and a Mr. Wilson. At the time, the area was known as Catharinstown, in honor of Catharine Montour who was the last leader of the local group of Seneca Indians. In 1802, the County's first post office was established in Catharinstown. George Mills established a mercantile business and tavern along the original bank of Catharine Creek, creating an additional settlement that was then called Mills Landing.

Despite the densely populated character, Montour has many natural recreation areas like Queen Catharine Marsh. This marsh is home to a variety of birds, flora, and fauna, and acts as a great recreational resource for the Town with a number of hiking trails. Montour is also home to many creeks rife with rainbow trout, which attract thousands of anglers each year.

Although there is no waterway by the name of Montour Falls in the Town, there are numerous waterfall attractions like Havana Glen, Deckertown Falls, Aunt Sarah's Falls, and the spectacular Shequaga [Chequaga] Falls, which the Indians called Tumbling Waters. Catharine Creek, famous for its great spawning water for rainbow trout, also flows through the Town.

[TOWN OF MONTOUR]

FIGURE 34: Town of Montour Critical Facilities



[TOWN OF MONTOUR]

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	135 Havana Glen Rd. Montour Falls, NY 14865	No	No
1	Highway Department	135 Havana Glen Rd. Montour Falls, NY 14865	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Montour does not have any designated emergency evacuation routes but State Route 14 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Montour has not identified sites for residents to shelter during emergencies or storm events. The Odessa Central School District located within the Village of Odessa, and Watkins Glen Central School District in the Village of Watkins Glen have both been identified as a potential shelter and could accommodate residents within the Town of Montour. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Montour has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to find suitable locations.

Permanent Housing

The Town of Montour recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Montour does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|TOWN OF MONTOUR|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Montour and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	08/2007	Town Board/ Planning Board
Zoning Code	Yes	12/2018	Planning Board
Subdivision Regulations	Yes	12/2018	Planning Board
Site Plan Review	Yes	12/2018	Planning Board
Flood Damage Prevention Law	Yes	07/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Montour.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	3 members
Environmental Board/ Commission	No	Participates on County Environmental Management Council
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Montour.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital Improvements Project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|TOWN OF MONTOUR|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 42: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Montour	1	\$246,800	\$3,229

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Town of Montour views their greatest hazard as bank erosion related to flooding and has undergone a number of bank stabilization projects, as well as ditch armoring with the assistance of the Schuyler County Soil and Water Conservation District. They also have great concern over the increased volume of traffic on Cass Road, which leads into the Village of Watkins Glen, since the opening of a WalMart Supercenter near there. Estimates are that traffic volume has increased over four times previous, which requires more frequent maintenance.

CHANGES IS DEVELOPMENT

The Town of Montour has not experienced significant changes in development, particularly in hazard-prone areas.

|TOWN OF MONTOUR|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	The town offices and the highway garage could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads and bridges are also at risk.	Costs of full losses to the town office building or highway garage would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage if all equipment was inside.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
NATURAL RISKS			
Flooding	<p>Within the Town of Montour there are 51 parcels within the 100 year floodplain, valued at over \$3.6M. The majority of these lie along Catharine Creek, a mix of agriculture, residential, and small business land use. No municipal buildings are within the floodplain. Several state, county, and local roads are regularly subjected to flooding in this area.</p> <p>The topography of streams and creeks through the town leads to a tendency of flash flooding in these basins. While improvements and updates have been made, some road bases and drainage systems remain old and inadequate for this threat.</p> <p>Of additional concern is the Montour Falls Reservoir Dam, which has been rated as a B hazard code by NYS DEC.</p>	<p>Much of the Town of Montour lies in the Catharine Valley, where runoff from higher elevations eventually collect, resulting in damaging flash flooding.</p> <p>The Town of Montour has had several hundreds of thousands of dollars in damages from floods over the past 16 years, ranging from flooded basements, to severely damaged homes and roads.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range from several hundreds of thousands of dollars in damages to a few million.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF MONTOUR|

TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Montour only has 41 mobile homes identified as the primary structure on properties.</p> <p>The topography of the Town often shields the more populated areas against high winds. Agricultural and wild areas minimize potential damages.</p>	<p>Little historical wind damage has occurred in the last 16 years, with a few instances of minor property damage, typically due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.</p>	<p>County-wide in the last 10 years there has only been \$5000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. With the higher population of the Town of Montour, damages could exceed \$100,000 in a severe event. Property damages and injuries associated with motor vehicle accidents are not included in these figures. Agricultural impacts from such storms could also result in losses.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Landslide	<p>The Town of Montour has suffered small, localized mud slides on occasions of flash flooding. These could impact roads in proximity to Catharine Creek and other prone areas.</p> <p>Impact areas generally have little development are either vacant, agricultural, or wild.</p>	<p>Despite the mildly elevated risk, no significant landslides have occurred in Schuyler County. Damages to roadways in a potential incident, however, could result in several hundreds of thousands of dollars in damages.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Hurricanes/ Tropical Storms	<p>Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.</p>	<p>The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. While agricultural damages could be significant, few high value crops are found in Montour.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads and municipal buildings would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture.	Damages to the lower value crops in the Town of Montour could result in losses in the tens of thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Forested areas and crop fields.	There have been no significant historical occurrences of wildfire in Montour. Damages are likely to be limited to thousands of dollars	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Major Fire	<p>Town municipal buildings and businesses. The higher population density along transportation corridors and near the villages can increase the risk of a major fire.</p> <p>Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.</p>	<p>While the risk of spread in the more densely populated areas is higher, the low population densities away from the villages helps prevent the spread of major fires. Losses are likely to range below \$500,000.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
MAN-MADE RISKS			
Cyber Attack	<p>The greatest threat to cyber attack lies with the town municipal offices and business within the town.</p>	<p>Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyber attack, technology utilized to control business operations and communications could be susceptible to attack</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release - In Transit	<p>Leading into and out of the more populated areas of the county and through the Town of Montour are NY State Routes 14 and 224 and County Roads 7, 8, and 14. While State Routes 14 and 224 are most likely to carry hazardous materials through the town, the others do see limited quantities.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p> <p>In addition to materials moving through the county, hazardous materials used in agriculture, as well as propane and heating oil are common on local roads</p>	<p>The larger quantities of hazardous materials transported along NYS Routes 14 and 224 lead to a higher threat and impact to the Town of Montour along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

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TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release- Fixed Site	Town highway garage and agricultural areas.	Damages could range as high as several hundred thousand dollars in extreme cases. Adherence to safety measures decreases risk.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building or a local business.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The increased population density of the town make the town more susceptible to the spread of a pandemic.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses due to productivity can be higher in the Town of Montour, particularly due to businesses being shut down to prevent further spread of disease. This can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along NY State Routes 14 and 224 and County Roads 7, 8, and 14 are of greatest concern due to increased traffic on these roadways.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The greatest risk of a biological agent release is at a municipal building or business.	While not likely to directly impact any structures in the town, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The Town offices and local businesses are likely to be the only targets of such an attack	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The Town offices and local businesses are likely to be the only targets of such an attack	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Local agriculture.	Livestock herds are small and limited in most of Montour, which would limit the spread of animal disease.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF MONTOUR|

TABLE 43: Town of Montour - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Internet Connectivity Failure	Town municipal buildings, businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Town municipal buildings and businesses.	Some municipal structures have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most. Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.	Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.

[TOWN OF MONTOUR]

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Montour. The hazard mitigation goals for Schuyler County and the Town of Montour are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

|TOWN OF MONTOUR|

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|TOWN OF MONTOUR|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Montour, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF MONTOUR				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE HIGHWAY GARAGE & TOWN HALL				
Project Number	A.1.7.j			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The Town of Montour Highway Garage and Town Hall do not have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Montour Highway Garage and Town Hall.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.	
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Montour Highway Department			
Coordinating Agencies	Town of Montour Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	< \$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|TOWN OF MONTOUR|

JURISDICTION: TOWN OF MONTOUR			
PROJECT NAME: REPLACE & UPGRADE BOX CULVERT WINTON ROAD			
Project Number	B.1.3.u		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The box culvert across Winton Road needs to be replaced. The wing walls are showing deterioration and the concrete guide rails are failing.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace and upgrade the box culvert is across Winton Road.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing local roadway drainage and stormwater management issues
Useful Life	25+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Montour Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 -2025
Estimated Time Required for Project Implementation	6 months	Project Funding Sources	Local Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended - will eventually result in full deterioration of the culvert, potential collapse, and uncontrolled stormwater runoff. This can undermine the roadway and nearby structures, which can be of significant cost
	Replace existing box culvert across Winton Road	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|TOWN OF ORANGE|

This section presents the jurisdictional annex for the Town of Orange. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Orange; an assessment of the Town of Orange's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent John R. Rappleye	Address: 956 Doane Rd, Beaver Dams, NY 14812 Phone: [607] 962-2978 Email: superintendenthighway@htva.net
Code Enforcement Officer	Address: 899 Hornby Road, Beaver Dams, NY 14812
Town Supervisor Norma Burris	Address: 899 Hornby Road, Beaver Dams, NY 14812 Phone: [607] 962-2978 Cell: [607] 738-8136 Email: Supervisor@htva.net

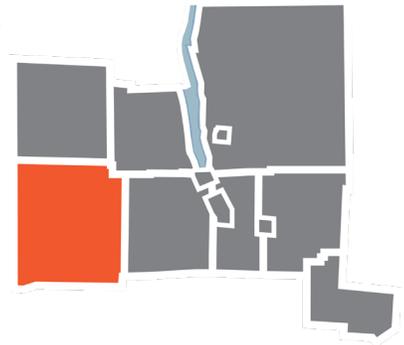
TOWN PROFILE

The Town of Orange is located in the southwest corner of Schuyler County. Orange shares its borders with Steuben County to the west and south, and the Towns of Tyrone and Reading to the north. It also shares its eastern border with the Town of Dix, except for a small southern portion that borders Chemung County. Town of Orange is governed by an elected Supervisor and a four-person Town Board.

Orange has wide expanses of forested hills and agricultural lands. A majority of the Town's forested land is made up of state-designated parkland. Over 56% of Orange is classified as a state forest or park. The abundance of designated state lands in the Town is a benefit for residents' quality of life, but can also be a burden to Orange's finances. With so much undevelopable land, the tax base is limited as growth can occur only on less than half of the Town's total land area.

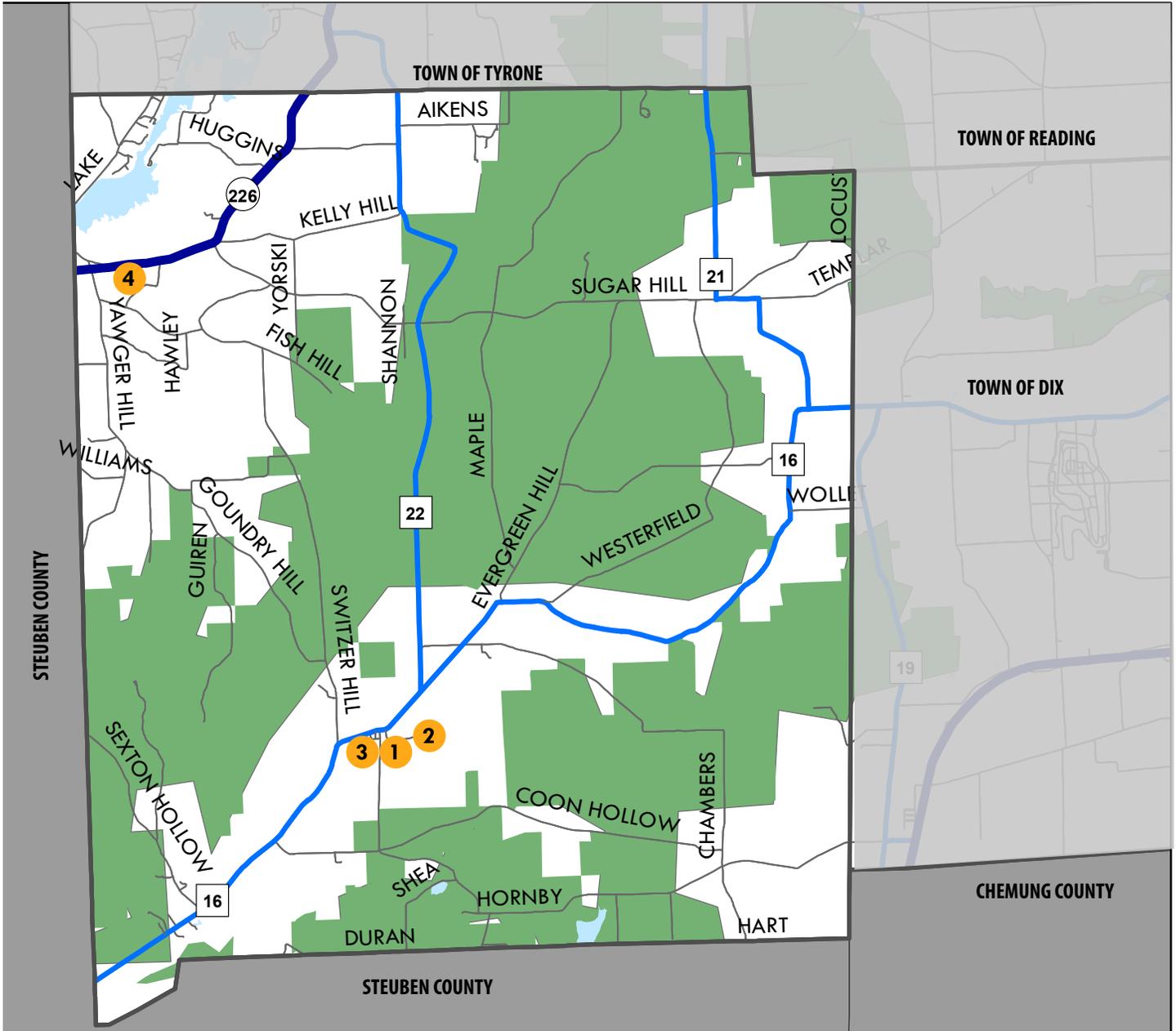
Henry Switzer and his wife Anna Marie Neff, with their family and two other individuals, first settled in Orange in roughly 1802. The area they settled is still referred to as Switzer Hill. The first schoolhouse was established in 1825, and Orange was then officially formed in 1836. The Town got its name after Orange County, New York, where many of the early settlers originally moved from. The main hamlet in Orange today is known as Monterey. While another hamlet and state forest area, named Sugar Hill for the abundant maple trees in the area, is also well known by residents and visitors.

What is unique about Orange is the living experience provided by its location and culture. Orange is a small town with a strong community spirit. In the summer, tourists and residents can walk or ride horses along the Six Nations trail, once used by the Iroquois. In the winter, people can use those same trails and rural roads for snowmobiling and cross-country skiing. It is important to the residents of Orange to create jobs by developing agriculture, exploring opportunities in the energy industry, and promoting tourism, all while maintaining the Town's natural beauty.

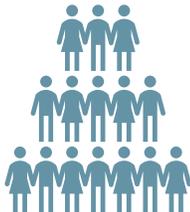


[TOWN OF ORANGE]

FIGURE 35: Town of Orange Critical Facilities



LAND AREA
 Land: 54.1 sq/mi
 Water: 0.3 sq/mi
 Density: 26 people/sq mi



POPULATION
 2020: 1,408
 [-12.5% Change]
 2010: 1,609
 Median Age: 46.4



MEDIAN INCOME
 \$50,881



MEDIAN HOME VALUE
 \$105,900



POVERTY RATE
 15.9%



EMPLOYMENT RATE
 53.5%
 Average Commute
 30.8 mins

|TOWN OF ORANGE|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

TABLE 44: Town of Orange Critical Facilities				
MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	899 Hornby Road, Beaver Dams, NY 14812	No	No
2	Highway Department	956 Doane Rd, Beaver Dams, NY 14812	No	No
3	Monterey Fire Department	1465 South Street, Beaver Dams, NY 14812	No	No
4	Bradford Central School District	2820 State Route 226, Bradford, NY	Yes	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Orange does not have any designated emergency evacuation routes but State Route 16 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The following is a list of potential shelter locations within the Town. In the event that sheltering is needed shelters will be determined at the time of an emergency. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

SHELTER NAME	ADDRESS	CAPACITY	ACCOMMODATES PETS?	ADA COMPLIANT?	BACK UP POWER	SERVICES PROVIDED
Bradford Central School	2820 State Route 226, Bradford, NY 14815	180	No	Yes	Yes	N/A

Temporary Housing

The Town of Orange has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to find suitable locations.

Permanent Housing

The Town of Orange recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Orange does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|TOWN OF ORANGE|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Orange and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	No	-	-
Zoning Code	No	-	-
Subdivision Regulations	No	-	-
Site Plan Review	No	-	-
Flood Damage Prevention Law	Yes	07/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Orange.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	No	
Environmental Board/ Commission	No	
Planners or engineers with knowledge of land development and land management practices	No	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Orange.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital Improvements Project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|TOWN OF ORANGE|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 45: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Orange	2	\$137,700	\$1,784

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Town of Orange, with hilly terrain throughout the town, experiences a great deal of flash flooding across most low lying areas. Recent flash flooding was experienced on Hornby Road from the breaking of a beaver dam in Cinnamon Lake State Forest. Sexton Hollow Road and Coon Hollow Road see repetitive flooding resulting in road damage and closures. Along with steep elevation, the Town Highway Superintendent also believes that logging in the state forest areas contribute to the threat of flooding. The town also has concern over the need for a community shelter in town as well as the frequency of wildland search and rescue calls in the state forests throughout the town.

Along with culvert upgrades, the Town of Orange has concern over one bridge at Sexton Hollow Road which has been already flagged as a hazard. They are also interested in seeing a bridge connecting Coon Hollow Road to County Road 16 being rebuilt as the previous bridge had been closed several years ago. The closure of this bridge now requires heavy trucks hauling cargo to a car salvage yard to take local roads not intended for such use.

TABLE 46: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Monterey [Orange]	5/10/2000	Flash Flood	\$ -
South Portion of County	7/22/2003	Flash Flood	\$ 3,000,000.00
Monterey [Orange]	6/10/2005	Flash Flood	\$ 50,000.00
Monterey [Orange]	6/19/2019	Flash Flood	\$2,000.00
Monterey	6/10/2005	Thunderstorm Wind	\$ 10,000.00

Description of Past Occurrences

- May 10, 2000 – Pine Creek flooded CR 22 in the Town of Orange.
- July 22, 2003 – Nearly stationary thunderstorms dumped between 2 and 3 inches of rain in less than 3 hours across the southern half of Schuyler County. Two-day rainfall totals were 3 and 6 inches. The heaviest rain fell across Monterey, Townsend, Montour Falls, Beaver Dams, Watkins Glen, and Odessa. The heavy rain caused flash flooding that closed many roads, and created several mudslides. In the Town of Dix, just west of Watkins Glen International Speedway, a bridge was washed out on County Route 16. Estimated property damage: \$3 million.
- June 10, 2005, Monterey – Slow moving thunderstorms with heavy rain caused flash flooding. Several roads were closed. A mobile home was knocked off its foundation from flowing water. Emergency personnel conducted one swift water rescue. One bridge was destroyed and another bridge damaged. Estimated property damage \$50,000.
- June 19, 2019 - Torrential rain producing thunderstorms over portions of the county dropping 2 to 5 inches of rainfall in less than 2 hours. Numerous streams, creeks and roads were flooded in the Monterey area.

CHANGES IS DEVELOPMENT

The Town of Orange has not experienced significant changes in development, particularly in hazard-prone areas.

|TOWN OF ORANGE|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	The town offices, Bradford Central School, fire department, and the highway garage could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads and bridges are also at risk.	Costs of full losses to the town office building, highway garage, or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage or fire department if all equipment was inside. A loss of Bradford Central School could result in damages over a million dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
NATURAL RISKS			
Flooding	<p>Within the Town of Orange there are 109 parcels within the 100 year floodplain, valued at over \$11.7M. The majority of these lay along Meads Creek and the southern shore of Lamoka Lake, a mix of agriculture and residential land use. Neither municipal buildings nor the Bradford Central School are within the floodplain. Several county and local roads are regularly subjected to flooding in these areas.</p> <p>The topography of streams and creeks as well as elevation drops through the town lead to a tendency of flash flooding in these basins. While improvements and updates have been made, many road bases and drainage systems remain old and inadequate for this threat.</p> <p>Development along the shore of Lamoka Lake and Meads Creek causes some concern for shore line flooding.</p> <p>Of additional concern has been expressed by the town regarding clear-cut logging, which has led to increased run off.</p>	<p>Crossing southwest through the middle of Orange is the Meads Creek Valley, where runoff from higher elevations collect, resulting in damaging flash flooding.</p> <p>The Town of Orange has experienced some flood related losses in the past 16 years, including 2003 and 2005, with combined losses of under \$100,000.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range from several hundreds of thousands of dollars in damages to a few million.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Orange records 130 mobile homes identified as the primary structure on properties.</p> <p>Agricultural and wild areas minimize potential damages.</p>	<p>Little historical wind damage has occurred in the last 16 years, with a few instances of minor property damage, typically due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.</p> <p>Agricultural impacts from such storms could also result in losses.</p>	<p>County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. The lower population of Orange can tend to keep damages to the tens of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Landslide	<p>While the general risk of landslide in the Town of Orange is low, steep slopes coupled with logging activity can increase the risk.</p>	<p>No significant landslides have occurred in Schuyler County. Damages to roadways in a potential incident, however, could result in several hundreds of thousands of dollars in damages.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Hurricanes/ Tropical Storms	<p>Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.</p>	<p>The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. While agricultural damages could be significant, few high value crops are found in Orange.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads, municipal buildings, and school would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture.	Damages to the lower value crops in the Town of Orange could result in losses in the tens of thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Forested areas and crop fields.	There have been no significant historical occurrences of wildfire in Orange. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings, school, and businesses.	The low population densities in much of the town prevent the spread of major fires. Losses are likely to range below \$500,000	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices, Bradford Central School, and businesses within the town.	Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyber attack, technology utilized to control business operations and comm	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release - In Transit	<p>NY State Route 226 crosses through the northeastern corner of town south of Lamoka Lake, while County Roads 16, 21, and 22 provide the greatest access into and through the town. These routes are most likely to carry hazardous materials through the town.</p> <p>In addition to materials moving through the county, hazardous materials used in agriculture, as well as propane and heating oil are common on local roads.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p>	<p>The larger quantities of hazardous materials transported along the routes identified lead to a higher threat and impact to the Town of Orange along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release- Fixed Site	Town highway garage and agricultural areas.	<p>Damages could range as high as several hundred thousand dollars in extreme cases.</p> <p>Adherence to safety measures decreases risk.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building, Bradford Central School, or a local business.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal. At a mass gathering area, such as the school, the impacts are potentially higher with a likely increase in injuries and fatalities.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The lower population density of the town tend to capitalize on social distancing, thereby minimizing the spread of contagious disease. Areas of larger populations, even those temporary such as Bradford Central School, can elevate risk, however.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses in productivity and closing of schools can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	County Route 16 has the highest risk for a significant transportation accident, although traffic on these state routes is generally not heavy.	Damages are likely to be localized to the incident site.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Biological Agent Release	The greatest risk of a biological agent release is at a municipal building, school, or business.	While not likely to directly impact any structures in the town, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IED	The Town offices, school, and local businesses would have the highest threat and impact from an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The Town offices, school, and local businesses would have the highest threat and impact from an RDD.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Limited local agriculture.	Livestock herds are small and limited in most of Orange, which would limit the spread of animal disease.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, school, and businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Town municipal buildings, businesses, farms.	Most businesses and farms have generators, limiting losses.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF ORANGE|

TABLE 47: Town of Orange - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IND	Town municipal buildings and school.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Incidents are typically isolated, resulting in minimal local impacts at the tens of thousands of dollars at most. Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Orange. The hazard mitigation goals for Schuyler County and the Town of Orange are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community's vulnerability to hazards. Some of the goals will reduce the County's vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding

|TOWN OF ORANGE|

GOAL	DESCRIPTION	HAZARD TYPE
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

|TOWN OF ORANGE|

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|TOWN OF ORANGE|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Orange, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF ORANGE				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN CRITICAL FACILITIES				
Project Number	A.1.7.k			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The Town of Orange Highway Garage and Monterey Fire Department do not have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Orange Highway Garage, and Monterey Fire Station. Orange town hall is co-located with these facilities and will benefit by an ability to maintain town government operations during a sustained power outage			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A		Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Orange Highway Department			
Coordinating Agencies	Town of Orange Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	< \$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|TOWN OF ORANGE|

JURISDICTION: TOWN OF ORANGE			
PROJECT NAME: REPLACE & UPGRADE CULVERT AT SWITZER HILL ROAD			
Project Number	B.1.3.v		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The culvert has collapsed and the road could collapse in another large storm event.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace Cross culvert on Switzer Hill Road just south of Goundry Hill. The culvert has collapsed and the road could collapse in another large storm event.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - The project will enlarge the passage of water under Switzer Hill Road allowing better passage of water during flooding, making flood water less prone to create damages to structures and undermine roadways.
Useful Life	25+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Town of Orange Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	County Budget, Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace Cross culvert on Switzer Hill Road	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|TOWN OF ORANGE|

JURISDICTION: TOWN OF ORANGE			
PROJECT NAME: STREAM STABILIZATION ALONG SWITZER HILL ROAD			
Project Number	B.1.3.w		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is need for stream stabilization and installation of flood attenuation wetland along Switzer Hill Road near County Road 16 in the Town of Orange.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conduct Stream stabilization measures and installation of flood attenuation wetland along Switzer Hill Road near County Road 16.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Low - This work along Pine Creek will reduce repetitive losses by addressing fluvial erosion, and both slowing stream velocity and providing area for floodwaters to dissipate.
Useful Life	10+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Town of Orange Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	County Budget , Hazard Mitigation Grants, FHwy Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Conduct Stream stabilization measures only	< \$50,000	Not Recommended - Flooding is likely to still impact the roadway.
	Conduct Stream stabilization measures and installation of flood attenuation wetland	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|TOWN OF ORANGE|

JURISDICTION: TOWN OF ORANGE			
PROJECT NAME: REPLACE & UPGRADE CULVERT #128 AT COON HOLLOW RD			
Project Number	B.1.3.x		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The culvert has significantly deteriorating and the road could collapse in another large storm event.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replace culvert #128 at Coon Hollow Road in the Town of Orange with a larger culvert.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - The project will enlarge the passage of water under Coon Hollow Road allowing better passage of water during flooding, making flood water less prone to create damages to structures and undermine roadways.
Useful Life	25+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Orange Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Replace Cross culvert on Coon Hollow Road	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

TOWN OF READING

This section presents the jurisdictional annex for the Town of Reading. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Reading; an assessment of the Town of Reading's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

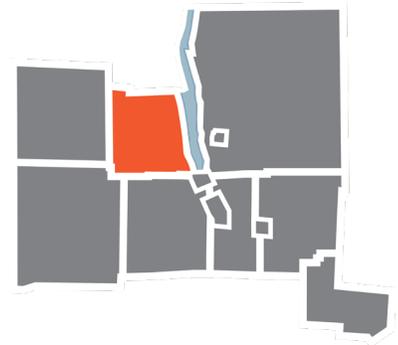
CONTACT	CONTACT INFORMATION
Highway Superintendent Jason Switzer	Address: 3951 State Route 14A, Watkins Glen, NY 14891 Phone: [607] 535-7459 ext.104 Highway Garage Phone 607-535-7459 ext 106 Email: readinghwy@htva.net
Code Enforcement Officer Dennis Tremblay	Address: 3914 County Rt 28, Watkins Glen, NY 14891 Phone: [607] 535-7459 ext.102 Cell: [607] 703-9191 Email: readingCEO@htva.net
Town Supervisor Stephen Miller	Address: 3914 County Rt 28, Watkins Glen, NY 14891 Phone: [607] 535-7459 ext.103 Email: readingsupervisor@htva.net

TOWN PROFILE

The Town of Reading is located on the west side of Seneca Lake within Schuyler County. It shares a western border with the Town of Tyrone, a northern border with Yates County, a southwestern border with the Town of Orange, a southern border with the Town of Dix, and a southeastern border with the Village of Watkins Glen. Town of Reading is governed by an elected Supervisor and a four-person Town Board.

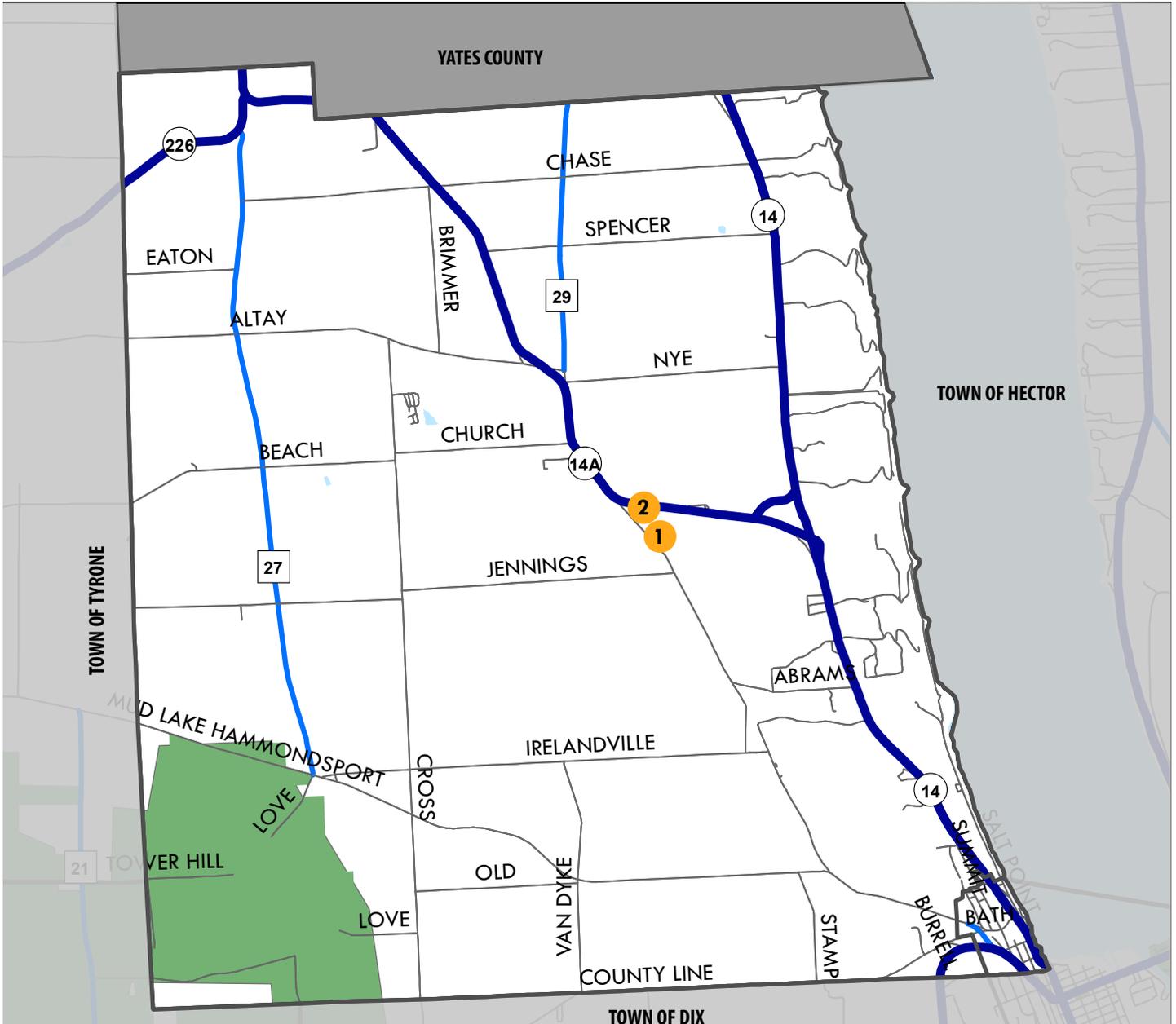
In 1798, John Dow came to the Town of Reading as an early settler. He had previously stayed with the Culver family, and with the followers of Jemima Wilkinson northward in Yates County on Seneca Lake's western shore. In 1801, the Culvers moved to a farm in Reading, opening a tavern and a store. Both were near the soon-to-be hamlet of Reading Center. The Town was formed in 1806 and was named Reading at the suggestion of an early resident from Reading, Pennsylvania. In the following years, the first Reading schoolhouse was built. The only other settlement on record in Reading is the hamlet of Irelandville, named for the family of land speculators who moved there around 1806. Still standing in this settlement is a drover's tavern erected in 1828.

The natural resources of Reading help make the Town economically successful. US Salt, the Town's largest employer and an important source of manufacturing in the region, is located within Reading on the Watkins Glen border. Furthermore, Reading offers residents all of the benefits of living in the Finger Lakes region of New York State. Views include not only Seneca Lake but also Hector's lakeside hills and vineyards. West of Seneca Lake, Reading's landscape is made of rolling hills and a variety of crops that also add to residents' quality of life.



[TOWN OF READING]

FIGURE 36: Town of Reading Critical Facilities



LAND AREA Land: 27.2 sq/mi Water: 0.0 sq/mi Density: 63 people/sq mi	POPULATION 2020: 1,719 [+0.7% Change] 2010: 1,707 Median Age: 44.4	MEDIAN INCOME \$64,792	MEDIAN HOME VALUE \$152,900	POVERTY RATE 16.1%	EMPLOYMENT RATE 54.6%
					Average Commute 24.3 mins

|TOWN OF READING|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

TABLE 48: Town of Reading Critical Facilities				
MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	914 County Rt 28, Watkins Glen, NY 14891	Yes	No
2	Highway Department	3951 State Route 14A, Watkins Glen, NY 14891	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Reading does not have any designated emergency evacuation routes but State Route 224 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Reading has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Reading has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to find suitable locations.

Permanent Housing

The Town of Reading recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Reading does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|TOWN OF READING|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Reading and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	02/2017	Town Board/ Planning Board
Zoning Code [Land Use]	No	10/2018	Planning Board
Subdivision Regulations	Yes	10/2019	Planning Board
Site Plan Review	Yes	10/2018	Planning Board
Flood Damage Prevention Law	Yes	08/1975	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Reading.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	Participates on County Environmental Management Council
Planners or engineers with knowledge of land development and land management practices	No	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Reading.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|TOWN OF READING|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 49: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Reading	2	\$630,000	\$905

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Town of Reading, like others in Schuyler County, views flooding as their primary hazard. An area of repetitive incidents is Rockstream Road in the north eastern corner of the town. Mitigation of this flooding area will require partnership with private property owners.

The Village of Watkins Glen seeks to examine a potential partnership with the Town of Reading to install a diversion ditch to capture runoff which causes repetitive flooding in the Village. This ditch, approximately 500 feet long, would ideally run north from County Road 23.

TABLE 50: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Reading	7/13/2014	Tornado [EF1]	\$ 50,000.00
Altay	6/12/2015	Thunderstorm Wind	\$ 5,000.00

CHANGES IS DEVELOPMENT

The Town of Reading has not experienced significant changes in development, particularly in hazard-prone areas. Wineries and Breweries continue to be constructed along NYS Rt 14, to date there has been no increase in stormwater runoff or flashflooding as a result of these businesses. There has also been new development of large lake properties along Seneca Lake, many of which are on seasonal roads. Additionally, since COVID, there has been an increase in the usage of these lakefront properties. This increase in the usage of these properties has not resulted in a change or increase in the risk of flooding or storm damage. However, it has increased the density of residents who could need emergency services in this area should a storm event occur.

|TOWN OF READING|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	The town offices, fire department, and highway garage, could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads, rail, and bridges are also at risk.	<p>Costs of full losses to the town office building, highway garage, or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage or fire department if all equipment was inside.</p> <p>Impacts resulting from damages to State Route 14 or the rail lines within Reading could lead to significant losses to businesses, tourism, and commerce in general.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
NATURAL RISKS			
Flooding	<p>While the Town of Reading has no FIRM, estimates are provided based upon the Base Flood Elevation for Seneca Lake in the Village of Watkins Glen.</p> <p>Reading's floodplain areas are generally isolated to the immediate shoreline of Seneca Lake, with 110 parcels within the 100 year floodplain, valued at over \$34M. These areas are primarily agricultural and industrial, with little residential land use. No municipal buildings are within the floodplain. Portions of State Route 14 and some local roads can be impacted by flooding.</p> <p>While a number of small creeks facilitate drainage directly to Seneca Lake, there still remain some flooding concerns within the Town, particularly along those creeks and where they cross through private property and under roads.</p> <p>While improvements and updates have been made, many road bases and drainage systems remain old and inadequate for this threat</p>	<p>The Town of Reading has experienced few flood related losses in the past 16 years.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range from several hundreds of thousands of dollars in damages to a few million.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Reading records 82 mobile homes identified as the primary structure on properties.</p> <p>Vine crops can be highly susceptible to wind damages.</p>	<p>The most significant occurrence of wind damage in Reading occurred in 2014 as the result of a confirmed EF-1 tornado, which resulted in approximately \$50,000 in damages. Otherwise, little historical wind damage has occurred in the last 16 years, with a few instances of minor property damage, typically due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines. Agricultural impacts from such storms can result in significant losses.	County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. The higher population and higher dollar value of homes and crops in Reading can lead to damages in the hundreds of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	The risk of landslide in the Town of Reading is low. While the geography of the Town of Reading does have some steeply elevated terrain, there is little threat to critical infrastructure from any land substance.	No significant landslides have occurred in Schuyler County. Damages to roadways in a potential incident, however, could result in several hundreds of thousands of dollars in damages.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Damages from water line freeze and crop damage. The microclimates along the shores of the Finger Lakes provide ideal growing temperatures and humidity for grapes. The lakes tend to keep temperatures and humidity within acceptable ranges for each season, but significant swings in temperature could result in severe crop damages	Water line freeze damage would be isolated and minimal. Agricultural damages can be significant with high value fine crops, which can range into the hundreds of thousands of dollars	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Earthquake	Roads, municipal buildings, and industry would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture.	Vine crops are a higher value crop that could suffer significant damages ranging into the hundreds of thousands of dollars	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Forested areas and crop fields. Reading has significant forested area, the majority of which is protected habitat for wildlife. The terrain limits inception and spread of wildfire, making any that do start easy to contain.	Terrain and vegetation types significantly limit the inception, spread, and damages of wildfire, as demonstrated by the lack of historic occurrences. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings. Reading zoning regulations dictate distances between buildings, which creates buffer zones for fires.	Due to low density, damages from structure fires are generally isolated. Losses are generally well under \$300,000.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and limited business and industry within the town.	Cyberattack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyberattack, technology utilized to control business operations and communications could be susceptible to attack, which can result in some financial losses.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	<p>NY State Route 14, which follows the western shore of Seneca Lake is the most significant roadway within Schuyler County and poses significant hazard for a hazardous materials in transit incident in the town. NY Route 14A and County Roads 27 and 29 also serve as major roads within the town.</p> <p>Norfolk Southern and Finger Lakes Rail lines traverse through Reading, both carrying a variety of hazardous materials.</p> <p>LPG and natural gas pipelines both travel through Reading. LPG is stored in quantity at the Enterprise facility in Reading, from which it is distributed by pipeline and bulk cargo tank trailers. Natural gas is similarly stored in salt caverns in Reading, from where it is routed by pipeline to distribution systems.</p> <p>In addition to materials moving through the county, hazardous materials used in agriculture and industry, as well as propane and heating oil are common on local roads.</p>	<p>The larger quantities of hazardous materials transported along the routes identified lead to a higher threat and impact to the Town of Reading along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Agricultural and industrial needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release- Fixed Site	Town highway garage and large farms.	Damages could range as high as several hundred thousand dollars in extreme cases.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building, mass gathering areas, or local business and industry.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal. At a mass gathering area, the impacts are potentially higher with a likely increase in injuries and fatalities.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	Mass gathering areas, often facilitated by local business events and festivals, can elevate risk of transmission.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses in productivity and closing of businesses and events can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along State Route 14 are of highest concern in Reading.	Damages are likely to be localized to the incident site. Safety monitoring on local, county, and state roads is ongoing, with the addition of guide rails and reductions in speed limits as needed.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The greatest risk of a biological agent release is at a mass gathering event, municipal office, or business.	While not likely to directly impact any structures in the town, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The town offices, mass gathering event, and local business and industry would have the highest threat and impact from an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The town offices, mass gathering event, and local business and industry would have the highest threat and impact from an IED.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Limited local agriculture.	Livestock herds are small and limited in most of Reading, which would limit the spread of animal disease.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, business and industry.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF READING|

TABLE 51: Town of Reading - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Sustained Power Outage	Town municipal buildings, business and industry	Some municipal structures have emergency power generation, which limits losses and impact. Most businesses and industry maintain emergency power generation as a matter of business continuity..	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings, and the industrial storage sites of LPG and natural gas	Although there are higher hazard sites in Reading, impacts are generally isolated to a limited area. Damages, however, could range into the millions of dollars in extreme cases. Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents. The high capacity storage methodologies used by the natural gas and LPG companies is proven to be safe in the industry.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|TOWN OF READING|

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Reading. The hazard mitigation goals for Schuyler County and the Town of Reading are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

|TOWN OF READING|

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|TOWN OF READING|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Reading, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF READING				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN HIGHWAY GARAGE				
Project Number	A.1.7.1			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The Town of Reading Highway Garage and Town Hall do not have a backup power source			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Reading Highway Garage.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High -An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.	
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Reading Highway Department			
Coordinating Agencies	Town of Reading Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	< \$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|TOWN OF READING|

JURISDICTION: TOWN OF READING			
PROJECT NAME: INSTALL DIVERSION DITCH COUNTY RD 23			
Project Number	B.1.3.y		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is a need for a diversion ditch off County Road 23 where it causes surface flooding, damaging roads and structures.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Install ~500' of diversion ditch north of the Village of Watkins Glen in the Town of Reading north from County Road 23.		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	Medium - This project will divert runoff from the higher elevation of southern Reading, preventing the runoff from damaging and topping roadways and entering the Village of Watkins Glen
Useful Life	10+ years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Reading Highway Department		
Coordinating Agencies	Watkins Glen Highway Department, Schuyler County Soil and Water Conservation District, Schuyler County Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024-2026
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, County and Town Budgets
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Install ~500' of diversion ditch north of the Village of Watkins Glen in the Town of Reading north from County Road 23.	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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TOWN OF TYRONE

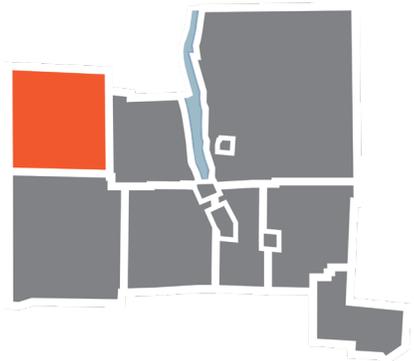
This section presents the jurisdictional annex for the Town of Tyrone. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Town of Tyrone; an assessment of the Town of Tyrone's risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Highway Superintendent Matthew Stiles	Address: 453 County Road 23, Dundee, NY 14837 Phone: [607] 292-3152 Email: tyronehighwaydept@gmail.com
Code Enforcement Officer Harold Russell	Address: 457 County Road 23, Dundee, NY 14837 Phone:[607] 292-3168 Cell: [607] 481-8663 Email: codeenforcement@townoftyrone.org
Town Supervisor Don Desrochers	Address:457 County Road 23, Dundee, NY 14837 Phone: [607] 292- 3185 Email: supervisor@townoftyrone.org

TOWN PROFILE

Located in the northwest corner of Schuyler County, the Town of Tyrone is the third-largest town in the County at 39.6 square miles. The Town shares a border with Yates County to the north and east, Steuben County to the west, the Town of Reading to the east, and the Town of Orange to the South. Its border with Reading is contiguous with the Old Preemption Line, established in 1786 by the Treaty of Hartford. This line originally divided the Native American lands of western New York between New York State and the Commonwealth of Massachusetts. Town of Tyrone is governed by an elected Supervisor and a four-person Town Board



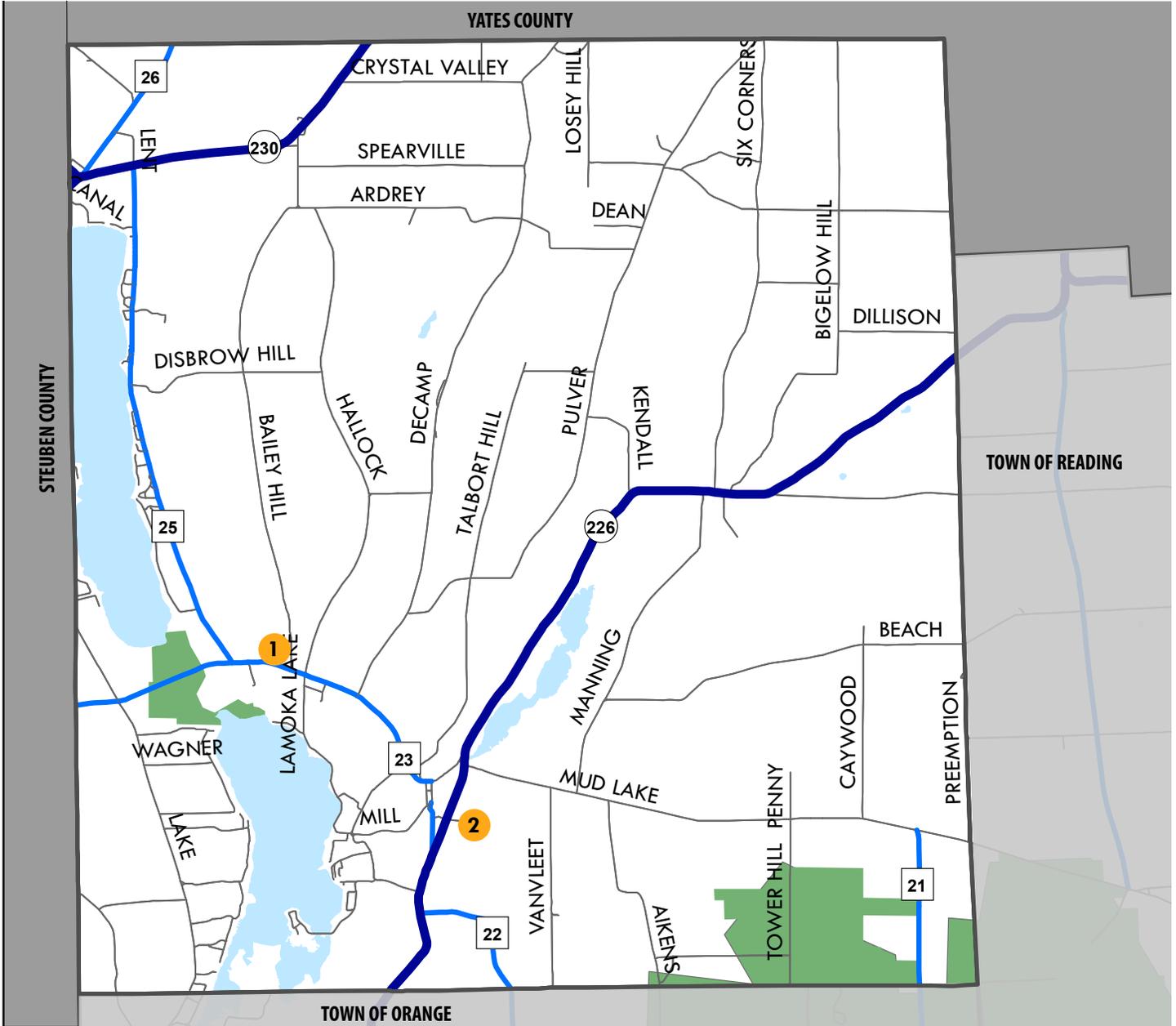
Over 3,000 years ago, the indigenous peoples of the Lamoka culture settled on Lamoka Lake within the current boundaries of Tyrone. While the Lamoka people disappeared by around 1300 BCE, they left behind evidence of the first identified prehistoric native culture in North America. It was not until 1798 that others would rediscover the area; shortly before the Bennett brothers and the families of two of their sons settled the Town in 1801. Originally Tyrone was known as the “Irish Colony” until General William Kernen, a settler in 1801, renamed it in 1822 after County Tyrone of Ireland.

Tyrone's housing stock is younger than most in the County, with over half of housing units built after 1960, and over a quarter after 1980. However, the boom in housing construction that occurred has left the Town with an unprecedented housing vacancy challenge, as almost half of the units remain vacant today. Tyrone also has challenges economically, with the sixth-lowest median household income in the County [\$42,461], and the fourth-highest poverty rate [14.1%]. Despite these figures, the Town has a notably low unemployment rate of 5.1%, the third-lowest in the County.

Today Tyrone is a mostly rural town with a large amount of land dedicated to agricultural production of hays and other field crops.

[TOWN OF TYRONE]

FIGURE 37: Town of Tyrone Critical Facilities



<p>LAND AREA Land: 37.5 sq/mi Water: 2.1 sq/mi Density: 44 people/sq mi</p>	<p>POPULATION 2020: 1,637 [+2.5% Change] 2010: 1,597 Median Age: 45.7</p>	<p>MEDIAN HOUSEHOLD INCOME \$50,568</p>	<p>MEDIAN HOME VALUE \$110,100</p>	<p>POVERTY RATE 17.7%</p>	<p>EMPLOYMENT RATE 51.5%</p> <p>Average Commute 26.1 mins</p>

|TOWN OF TYRONE|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Town Hall	457 County Road 23, Dundee, NY 14837	No	No
1	Highway Department	435 County Road 23, Dundee, NY 14837	No	No
2	Tyrone Fire Department	3600 State Route 226, Dundee, NY 14837	Yes	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Town of Tyrone does not have any designated emergency evacuation routes but State Route 226 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Town of Tyrone has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Town of Tyrone has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to find suitable locations.

Permanent Housing

The Town of Tyrone recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Town of Tyrone does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Town and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Town and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

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CAPABILITIES ASSESSMENT PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Town of Tyrone and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	No	-	-
Zoning Code	No	-	-
Subdivision Regulations	Yes	08/2009	Planning Board
Site Plan Review	Yes	12/2004	Planning Board
Flood Damage Prevention Law	No	-	-

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Town of Tyrone.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	Participates on County Environmental Management Council
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Town of Tyrone.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

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NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 53: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Town of Tyrone	14	\$1,971,400	\$13,725

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Town of Tyrone rates flooding, wind damage, and winter storms as the greatest hazards impacting the town. The Highway Superintendent, who has worked for the town for several decades, said that storms in recent years are more severe than before, bringing more rain in a shorter period of time. Repetitive impacts are often seen along the Tobehanna Creek near road crossings.

TABLE 54: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Tyrone	8/10/2008	Flash Flood	\$ -
Tyrone	6/14/2015	Flash Flood	\$2,600,000.00
Tyrone	7/26/2005	Thunderstorm Wind	\$ 2,000.00
Tyrone	7/8/2007	Thunderstorm Wind	\$ -
Tyrone	4/19/2013	Thunderstorm Wind	\$ 5,000.00
Tyrone	6/8/2015	Thunderstorm Wind	\$ 5,000.00
Tyrone	6/18/2017	Thunderstorm Wind	\$4,000.00
Tyrone	7/30/2019	Thunderstorm Wind	\$ 5,000.00

Description of Past Occurrences

- June 14, 2015 - Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, other businesses were flooded in the Town of Tyrone.

CHANGES IS DEVELOPMENT

The Town of Tyrone has not experienced significant changes in development, particularly in hazard-prone areas.

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HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>The town offices, fire department, and highway garage, could fall victim to a critical infrastructure failure. Transportation infrastructure, including roads, rail, and bridges are also at risk.</p>	<p>Costs of full losses to the town office building, highway garage, or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway garage or fire department if all equipment was inside.</p> <p>Impacts resulting from damages to State Routes could lead to significant losses to businesses and commerce in general.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Tyrone's floodplain areas are generally isolated to the shorelines of Lamoka and Waneta Lakes, as well as the Tobehanna Creek basin, with 413 parcels within the 100 year floodplain, valued at over \$50M. There are significant residential parcels in these areas, as well as agricultural and recreational land uses. No municipal buildings are within the floodplain. Portions of State Routes 226 and 230, as well as County Roads 23, 25, and 26 can be impacted by flooding.</p> <p>Tyrone has an up to date comprehensive plan, but does not utilize any zoning or land use regulations, which could serve to minimize future losses.</p> <p>While improvements and updates have been made, many road bases and drainage systems remain old and inadequate for this threat.</p> <p>The Tyrone Power Company Dam is a C rated hazard code dam</p>	<p>Despite the significant number of parcels within the 100 year floodplain, Tyrone has experience relatively few significant losses due to flooding. The most frequent areas of flooding are in the Tobehanna Creek basin, where runoff impacts roads and drainage systems.</p> <p>Damages to roadways, bridges, and drainage systems from a flash flood could range within several hundreds of thousands of dollars in damages</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Tyrone records 124 mobile homes identified as the primary structure on properties, including those with two parks.</p> <p>With the majority of land use as forest and agriculture, the greatest impacts of wind damage lie in blow down and crop damage. Mobile homes are still permitted within the town, although zoning has restricted the addition of additional units.</p>	<p>There have been few significant damaging wind events in Tyrone in the past 16 years, with only a few citing losses in the thousands of dollars. Most damages are due to fallen trees and tree limbs. Future potential damages are likely to remain under \$100,000 per occurrence.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.</p> <p>Agricultural impacts from such storms can result in significant losses.</p>	<p>County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Damages in Tyrone could be expected to range in the tens of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
 Landslide	<p>The risk of landslide in the Town of Tyrone is low.</p> <p>While the geography of the Town of Tyrone does have some steeply elevated terrain, there is little threat to critical infrastructure from any land substance.</p>	<p>No significant landslides have occurred in Schuylers County. Damages to roadways in a potential incident, however, could result in several hundreds of thousands of dollars in damages.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Hurricanes/ Tropical Storms	<p>Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.</p>	<p>The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No town-specific data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze and crop damage. Hay crops are most prevalent in Tyrone.	Water line freeze damage would be isolated and minimal. Agricultural damages are possible with local crops, which can range into the tens of thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads, municipal buildings, and industry would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Local agriculture. Hay tends to be more drought resilient, but can still be impacted by longer term incidents.	The impacts to hay crops could range into the tens of thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Forested areas and crop fields Much of the land mass within Tyrone is easily accessible, resulting in a quick response and containment of any fires that start.	There have been no significant historical occurrences of wildfire in Tyrone. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Town municipal buildings and businesses.	The higher population densities along transportation corridors can increase the chances of spreading of major fires, although density of structures through most of the town is lower. Losses are likely to range below \$500,000 dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyber attack lies with the town municipal offices and businesses within the town.	Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the town from a cyber attack, technology utilized to control business operations and communications could be susceptible to attack, which can result in some financial losses.	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release - In Transit	<p>State Routes 226 and 230, as well as County Roads 23, 25, and 26 pose the most significant threat of hazardous materials in transit in the town.</p> <p>There is significant natural gas distribution through the northern areas of town.</p> <p>In addition to materials moving through the county, hazardous materials used in agriculture, as well as propane and heating oil are common on local roads.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p>	<p>The larger quantities of hazardous materials transported along the routes identified lead to a higher threat and impact to the Town of Tyrone along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Agricultural and industrial needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the town.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release- Fixed Site	The town highway garage, agricultural areas, and businesses hold the highest risk for a fixed site hazardous materials incident.	Impacts are generally isolated to a limited area. Damages, however, could range into the hundreds of thousands of dollars in extreme cases.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Active Shooter	Active shooter incidents are most likely to take place in the town municipal building or local businesses.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The town’s small population density can contribute to social distancing and limit exposure.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses in productivity and closing of businesses can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along State Routes 226 and 230, as well as County Roads 23, 25, and 26 are of highest concern in Tyrone	Damages are likely to be localized to the incident site.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Biological Agent Release	The greatest risk of a biological agent release is at a municipal office or business.	While not likely to directly impact any structures in the town, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IED	The town offices and local businesses would have the highest threat and impact from an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The town offices and local businesses would have the highest threat and impact from an RDD.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	Local livestock.	Livestock herds are larger in most of Tyrone, which could facilitate the spread of animal disease.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Town municipal buildings, businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Town municipal buildings, businesses, farms.	Some municipal structures have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 55: Town of Tyrone Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IND	Town municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	Impacts are generally isolated to a limited area. Damages, however, could range into the tens of thousands of dollars in extreme cases Regulations on the storage of natural gas and propane significantly increase safety and decrease the likelihood of incidents.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Town of Tyrone. The hazard mitigation goals for Schuyler County and the Town of Tyrone are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms

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GOAL	DESCRIPTION	HAZARD TYPE
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

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BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Tyrone, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF TYRONE				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE HIGHWAY GARAGE & TOWN HALL				
Project Number	A.1.7.m			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The Town of Tyrone Highway Garage and Town Hall do not have a backup power source.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Procure and install a permanent 10 kw emergency generator for the Tyrone Highway Garage and Town Hall.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.	
Useful Life	15+ years			
Estimated Cost	Medium \$50,000 - \$99,999			
PLAN FOR IMPLEMENTATION				
Lead Agency	Town of Tyrone Highway Department			
Coordinating Agencies	Town of Tyrone Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Town Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Evacuation and relocation of government operations in the event of a sustained power outage.	< \$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.	
	Procure and install emergency generator	\$50,000 - \$99,999	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: TOWN OF TYRONE			
PROJECT NAME: IDENTIFY PROJECTS TO MINIMIZE FLOODING LOSSES AT CROSSING OF TOBEHANNA CREEK			
Project Number	B.1.3.z		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The branches of Tobehanna Creek often pose flash flooding issues, particularly at road crossings, which are a combination of state, county, and local roads.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	The Town and partners will examine these areas and identify projects to minimize flooding losses at road crossings of the big and little Tobehanna Creek		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing local roadway drainage and stormwater management issues and a reduction in flood damage
Useful Life	1-5 years		
Estimated Cost	Medium \$50,000 - \$99,999		
PLAN FOR IMPLEMENTATION			
Lead Agency	Town of Tyrone Highway Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Schuyler County Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023
Estimated Time Required for Project Implementation	1 year, project ongoing	Project Funding Sources	Local Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Identify projects to minimize flooding losses without action items	< \$50,000	Not Recommended
	Identify projects to minimize flooding losses at road crossings of Tobehanna Creek and include action items for mitigation	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

VILLAGE OF BURDETT

This section presents the jurisdictional annex for the Village of Burdett. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Village of Burdett; an assessment of the Village of Burdett's risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Code Enforcement Officer Jason Kelly	Address: 4124 Lake Avenue, Burdett, NY 14818 Phone: [607] 546-2266 Cell: [607] 425-6351
Village Clerk Charlotte Jaynes	Address: 4124 Lake Avenue, Burdett, NY 14818 Phone: [607] 546-2266 Email: BurdettVillageClerk@gmail.com
Village Mayor Dale Walters	Address: 4124 Lake Avenue, Burdett, NY 14818 Phone: [607] 546-2266

VILLAGE PROFILE

The Village of Burdett is located in the southwestern section of the Town of Hector. It is fully contained within Hector's borders and acts as a gateway to the eastern Seneca wine trail and Village of Watkins Glen via State Route 79. The Village of Burdett is governed by an elected Mayor and a four-person Board of Trustees.

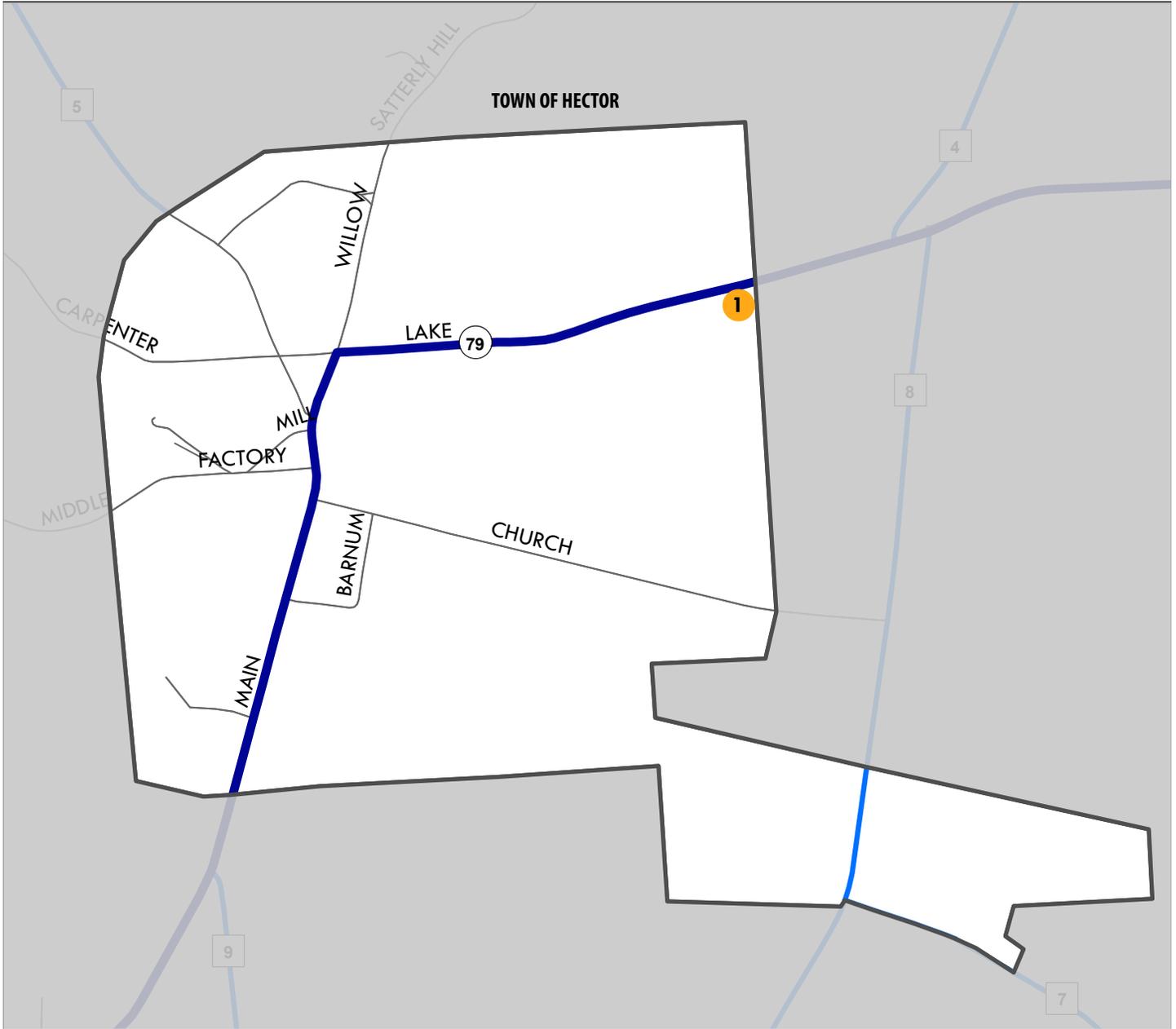
Burdett was known in the past as Hamburg or Tod Pole, the latter name derived from the erection of a political "totem" near a local tavern. The first permanent settler of the Village was Joseph Gillespie in 1799. He had been given a property title to the area as payment for his services during the Revolutionary War. The first post office was established in 1819, and there were 360 inhabitants by 1860. As settlement continued residents gained access to three churches, a woolen factory, an iron foundry, a gristmill, a sawmill, and a tannery. In 1868, The Burdett Local Visitor, Burdett's first newspaper began circulation. Construction of the Lehigh Valley Railroad followed in 1891 and was finished by 1892. However, it wouldn't be until six years later, in 1898, that the Village would be incorporated.



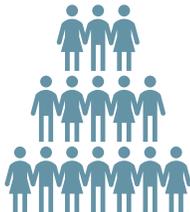
Burdett is a small and quaint village with an appealing main street core, accessible by State Route 79 that runs through the village center. Burdett has several assets that make it well-positioned for growth. First, it has the second-highest level of educational attainment among Schuyler County villages, behind the County seat of Watkins Glen. Second, Burdett is a gateway to the continuously growing agricultural industries that have helped make the town of Hector the center of population growth in Schuyler County it is today. Third, Burdett is home to many businesses that serve both tourists and the citizens of Burdett. For example, there is a popular horse stable, Painted Bar Stables, which leads horseback tours through area trails and along the gorgeous vistas provided by the elevated hills of Seneca Lake's eastern shoreline. Lastly, Burdett's unique character and proximity to Tompkins County make it an attractive place to live.

[VILLAGE OF BURDETT]

FIGURE 38: Village of Burdett Critical Facilities



LAND AREA
 Land: 1.0 sq/mi
 Water: 0 sq/mi
 Density: 331 people/sq mi



POPULATION
 2020: 331
 [-2.6% Change]
 2010: 340
 Median Age: 49.8



MEDIAN HOUSEHOLD INCOME
 \$50,625



MEDIAN HOME VALUE
 \$125,000



POVERTY RATE
 14.4%



EMPLOYMENT RATE
 50.1%
 Average Commute
 24.1 mins

|VILLAGE OF BURDETT|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Village Hall	4124 Lake Avenue, Burdett, NY 14818	Yes	No
1	Burdett Fire Department	24124 Lake Avenue, Burdett, NY 14818	Yes	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Village of Burdett does not have any designated emergency evacuation routes but State Route 414 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Village of Burdett has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Town will work with the County to identify the locations and notify residents.

Temporary Housing

The Village of Burdett has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Village will work with the Town and County to find suitable locations.

Permanent Housing

The Village of Burdett recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Village of Burdett does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Village and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Village and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|VILLAGE OF BURDETT|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Village of Burdett and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	2013	Town Board/ Planning Board
Zoning Code	No	-	-
Subdivision Regulations	No	-	-
Site Plan Review	No	-	-
Flood Damage Prevention Law	Yes	07/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Village of Burdett

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	Participate on County Environmental Management Council
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Town Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Village of Burdett.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|VILLAGE OF BURDETT|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 57: NFIP Policy Statistics [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Village of Burdett	0	\$0	\$0

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

TABLE 58: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Burdett	11/29/2005	Flash Flood	\$ 10,000.00
Burdett	6/27/2006	Flash Flood	\$ 15,000.00
Burdett	8/18/2009	Thunderstorm Wind	\$ -
Burdett	6/24/2013	Thunderstorm Wind	\$ 2,000.00

Description of Past Occurrences

- November 29, 2005 - 1 to 3 inches of rain caused urban and minor flooding. Route 14 just north of Watkins Glen was closed when water lifted part of the road surface. Several homes in Watkins Glen, Burdett, and Reading Center had water pumped out of their basements.
- June 27, 2006 - Heavy rains caused flash flooding along Route 414 in Burdett, Odessa and the Town of Hector

CHANGES IS DEVELOPMENT

The Village of Burdett has not experienced significant changes in development, particularly in hazard-prone areas.

|VILLAGE OF BURDETT|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>The Village offices and Fire Department could fall victim to a critical infrastructure failure.</p> <p>Burdett also shares a small municipal water system with the Town of Hector which also could potentially be impacted. This water system provides water to homes, businesses, and fire hydrants. Transportation infrastructure, including roads, rail, and bridges are also at risk.</p>	<p>Costs of full losses to the village office building or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the fire department if all equipment was inside.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Burdett has 28 parcels within the 100 year floodplain valued at under \$2M. The floodplain runs along the Hector Falls Creek which runs generally east-west through the middle of the village. Most parcels are vacant or agricultural, although some are residential. Although the Fire Department and Village Hall property does enter the floodplain, the building itself is not considered to be within the floodplain.</p> <p>Aside from the area of Willow Street [State Route 79] and Main Street, under which the Hector Falls Creek passes, there is little development near the floodplain.</p>	<p>The Village has experienced few flood related losses in the past 16 years.</p> <p>Damages to roadways and drainage systems from a flash flood would range well under \$500,000.</p> <p>Upgrades of culverts as well as other flood protection measures must continue.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Severe Wind/ Tornado	<p>The highest threat lies with mobile homes. Burdett records 18 mobile homes identified as the primary structure on properties.</p>	<p>Little historical wind damage has occurred in the last 16 years within the Village, with few instances of minor property damage. Future potential damages are likely to remain under \$100,000 per occurrence</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.	County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Damages would likely range within the tens of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	The risk of landslide in the Village of Burdett is low. There is no significant elevation in the Village of Burdett.	No significant landslides have occurred in Schuyler County. While a slight risk of fluvial erosion exists from Hector Falls Creek, damages would be very localized and minimal, ranging in the tens of thousands of dollars at most.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No municipal data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Extreme Temperatures	Damages from water line freeze and crop damage.	Water line freeze damage would be isolated and minimal. Agricultural damages in the Village would also be minimal, barely exceeding figures in the thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Earthquake	Roads and municipal buildings would suffer the highest impacts.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	Limited local agriculture.	Agriculture within the village is limited and impacts would be within thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Crop fields and small wild areas hold the only potential for wildfire. All land mass within Burdett is easily accessible, resulting in a quick response and containment of any fires that start.	There have been no significant historical occurrences of wildfire in Burdett. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Fire	Municipal buildings and businesses. Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.	The higher population densities along transportation corridors can increase the chances of spreading of major fires. Losses are likely to range below \$500,000 dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
MAN-MADE RISKS			
Cyber Attack	The greatest threat to cyberattack lies with the Village municipal offices and businesses within the village.	Cyber attack is only likely to result in loss of data and computer hardware. While there is little infrastructure to be damaged within the Village from a cyber attack, technology utilized to control speedway operations and communications could be susceptible to attack.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release - In Transit	State Route 79 and Church Street, which is a local road, pose the most significant threat of hazardous materials in transit incidents. NY Route 79 is a major thoroughfare between Watkins Glen and Ithaca, while Church Street leads east out of the Village toward a large industrial dairy farm. Although most traffic to the farm travels on County Road 8 through Hector, some traffic does pass through Burdett. Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents. In addition to materials moving through the Village, propane and heating oil are common on local roads.	The larger quantities of hazardous materials transported along the routes identified lead to a higher threat and impact to the Village along these corridors. While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages. Agricultural needs as well as the prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported through the Village. Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount.	<u>Likely Probability</u> - Event is probable in the next three years <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Hazard Materials Release- Fixed Site	Fixed hazardous materials are limited to certain businesses, small farms, and the fire department.	The risk of fixed site hazardous materials incidents in Burdett is extremely limited and is typically associated with LPG and fuel. Damages are likely to remain contained to the tens of thousands at the highest thresholds	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Active Shooter	Active shooter incidents are most likely to take place in the village municipal building or local businesses.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The population density of the Village of Burdett can contribute to a higher risk of transmission of communicable diseases.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. Losses in productivity and closing of businesses can have a significant impact on the local economy.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along State Route 79 are of highest concern in Burdett.	Damages are likely to be localized to the incident site.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Biological Agent Release	The greatest risk of a biological agent release is at the municipal office or businesses.	While not likely to directly impact any structures in the village, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IED	The municipal offices and local businesses would have the highest threat and impact from an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages. Mass gathering locations could see injuries and losses of life in the dozens.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The municipal offices and local businesses would have the highest threat and impact from an RDD.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	There is not a significant livestock population in the Village.	N/A	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Internet Connectivity Failure	Municipal buildings and businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Municipal buildings and businesses.	Some municipal structures have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF BURDETT|

TABLE 59: Village of Burdett - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
IND	Municipal buildings.	Damages would be in the millions for such a catastrophic event.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Natural Gas/ Propane Storage	Local filling stations, town municipal buildings.	This hazard, in Burdett, is similar to that of fixed facility hazardous materials. Damages would be generally limited to the tens of thousands of dollars.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF BURDETT|

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Village Burdett. The hazard mitigation goals for Schuyler County and the Village Burdett are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

|VILLAGE OF BURDETT|

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|VILLAGE OF BURDETT|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Dix, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: TOWN OF VILLAGE OF BURDETT				
PROJECT NAME: ADDRESS FLOODING AT FACTORY AND MILL STREETS				
Project Number	B.1.3.aa			
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	During large storm event there is constant flooding at the intersection of Factory St and Mill St.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Install two crossover pipes and a new culvert at the intersection of Factory St and Mill St. Create new ditching along Factory St to provide additional stormwater management.			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Medium - Addressing local roadway drainage and stormwater management issues and a reduction in flood damage	
Useful Life	25+ years			
Estimated Cost	High > \$100,000			
PLAN FOR IMPLEMENTATION				
Lead Agency	Schuyler County Soil and Water Conservation District			
Coordinating Agencies	Town of Hector Highway Department, Schuyler County Highway Department			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024-2026	
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Village Budget, Hazard Mitigation Grants	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Replace Cross culvert on Switzer Hill Road	> \$100,000	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

|VILLAGE OF BURDETT|

JURISDICTION: TOWN OF VILLAGE OF BURDETT			
PROJECT NAME: ADDRESS FLOODING BEHIND FIRE DEPARTMENT			
Project Number	B.1.3.bb		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The area behind the Fire Department experiences significant flooding and it beginning to undermine the parking lot associated with the Fire Department impacting first response capabilities.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Install stormwater drainage infrastructure to reroute the runoff to new retention pond behind the Fire Department.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	High - Maintaining access to the Fire Department.
Useful Life	25+ years		
Estimated Cost	High > \$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Schuyler County Soil and Water Conservation District		
Coordinating Agencies	Town of Hector Highway Department, Schuyler County Highway Department		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024-2026
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Village Budget, Hazard Mitigation Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Install necessary stormwater drainage infrastructure	>\$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

VILLAGE OF MONTOUR FALLS

This section presents the jurisdictional annex for the Village of Montour Falls. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Village of Montour Falls; an assessment of Montour Falls's risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Department of Public Works Dean Hillyard	Address: 195 Cook Street, Montour Falls Phone: [607] 535-9580 Email: dpw@villageofmontourfalls.com
Code Enforcement Officer Tony Nevone	Address: 408 W. Main Street, Montour Falls Phone: [607] 738-4323 Email: codemfv@gmail.com
Village Mayor James Ryan	Address: 408 W. Main Street, Montour Falls Phone: [607] 535-7367 Email: jryan@villageofmontourfalls.com

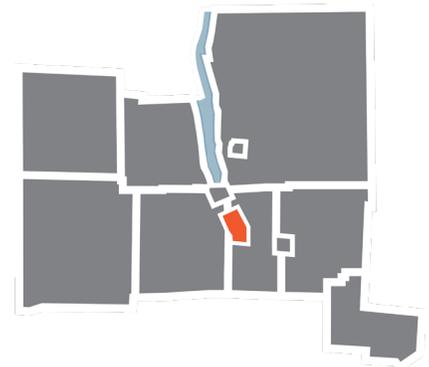
VILLAGE PROFILE

The Village of Montour Falls is located south of Seneca Lake and the Village of Watkins Glen, split between the eastern border of the Town of Dix, and the western border of the Town of Montour. As the southern gateway to the Finger Lakes Region, the Village is becoming an important destination center for residents and visitors of Schuyler County. The Village of Montour Falls is governed by an elected Mayor and a four-person Board of Trustees.

Montour Falls also has historical significance to the region, as it is home to the only Historic District in Schuyler County. The "Glorious T" District received its place on the National Register of Historic Places in 1978. The District is made up of 24 buildings, and the iconic Shequaga [Chequaga] Falls, which tumble 156 feet into the heart of the Village. Montour Falls also boasts a unique sense of place with the historic Greek Revival, Italianate, Queen Anne, and Victorian architecture of the residential and public buildings throughout the Village.

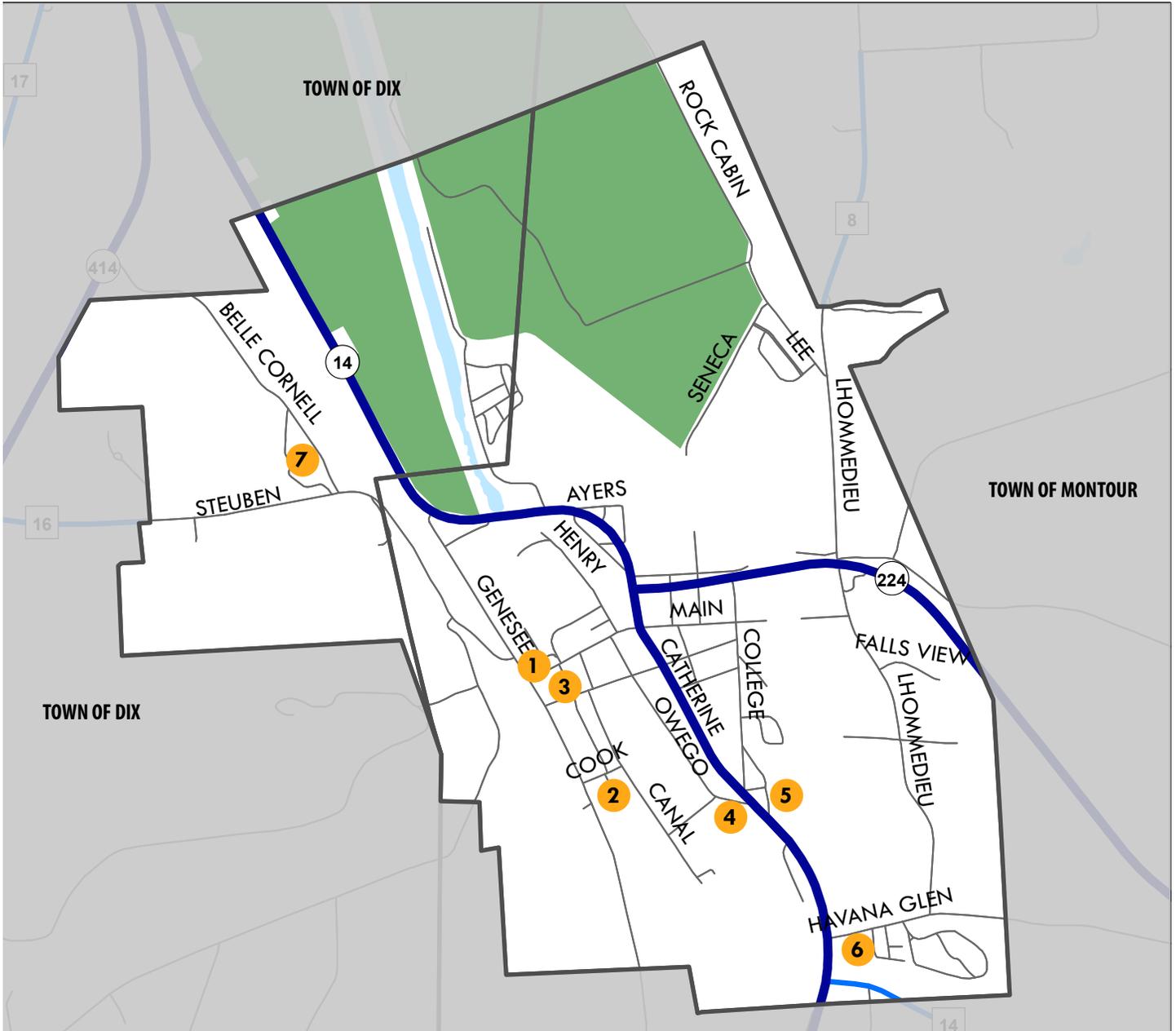
In 1836, the Village was incorporated under the name "Havana." However, the name changed to the Village of Montour Falls in 1893 in honor of Indian "Queen" Catharine Montour. During the 1700s Montour led a large village of the Seneca Nation of Indians located on the site. Charles Cook, the Village's founder, came to Montour Falls in 1829, just seven years before its incorporation. His influence was widespread throughout the County and is remembered through the former Cook Academy he had built, which is known today as the New York State Academy of Fire Sciences. The Village today is primarily residential with a mix of commercial uses located along Main Street, and it is also home to the only hospital located within Schuyler County.

Despite several economic challenges, there is no doubt that the character of Montour Falls is enchanting, and is enjoyed by residents and tourists as a part of their overall experience in the County and the Finger Lakes Region.



[VILLAGE OF MONTOUR FALLS]

FIGURE 39: Village of Montour Falls Critical Facilities



<p>LAND AREA Land: 3.0 sq/mi Water: 0 sq/mi Density: 545 people/sq mi</p>	<p>POPULATION 2020: 1,635 <i>[-4.4% Change]</i> 2010: 1,711 Median Age: 48.8</p>	<p>MEDIAN HOUSEHOLD INCOME \$35,000</p>	<p>MEDIAN HOME VALUE \$100,000</p>	<p>POVERTY RATE 23.7%</p>	<p>EMPLOYMENT RATE 42.0%</p> <p>Average Commute 23.4 mins</p>

VILLAGE OF MONTOUR FALLS

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Village Hall	408 West Main St, Montour Falls, NY 14865	No	No
2	Department of Public Works	195 Cook St, Montour Falls, NY 14865	No	No
3	Montour Falls Fire Department	111 Lee St, Montour Falls, NY 14865	Yes	No
4	Schuyler County Human Services Complex	323 Owego St. Montour Falls, NY 14865	Yes	Yes
5	NYS Police	600 S College Ave, Montour Falls, NY 14865	Yes	No
6	Town of Montour Offices/ Highway Dept	135 Havana Glen Rd. Montour Falls, NY 14865	No	No
7	Schuyler Hospital	220 Steuben St, Montour Falls, NY 14865	Yes	No
5	NYS Fire Academy	600 S College Ave, Montour Falls, NY 14865	Yes	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Village of Montour Falls does not have any designated emergency evacuation routes but State Route 14 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The Village of Montour Falls has not identified sites for residents to shelter during emergencies or storm events. In the event a shelter is needed, the Village will work with the County and Town of Montour to find suitable locations.

Temporary Housing

The Village of Montour Falls has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event a shelter is needed, the Village will work with the Town and County to identify the locations and notify residents.

Permanent Housing

The Village of Montour Falls recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Village of Montour Falls does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Village and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Village and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

VILLAGE OF MONTOUR FALLS

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Village of Montour Falls and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	2017	Village Board/ Planning Board
Zoning Code	Yes	10/2019	Planning Board/ Zoning Board of Appeals
Subdivision Regulations	Yes	10/2019	Planning Board
Site Plan Review	Yes	04/2020	Planning Board
Flood Damage Prevention Law	Yes	03/1993	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Village of Montour Falls.

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	Yes	Sustainability Committee
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Village Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPEd
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Village of Montour Falls.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	Yes

VILLAGE OF MONTOUR FALLS

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 61: NFIP Policy Statistics for Schuyler County [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Village of Montour Falls	8	\$3,425,100	\$13,520

SUMMARY OF HAZARD IDENTIFICATION

UNIQUE HAZARD EVENT HISTORY/ IMPACT

TABLE 62: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Montour Falls	4/27/2011	Thunderstorm Wind	\$ 5,000.00
Montour Falls	4/19/2013	Thunderstorm Wind	\$ 1,000.00
Montour Falls	7/8/2014	Thunderstorm Wind	\$ 20,000.00

Description of Past Occurrences

- July 22, 2003 – Nearly stationary thunderstorms dumped between 2 and 3 inches of rain in less than 3 hours across the southern half of Schuyler County. Two-day rainfall totals were 3 and 6 inches. The heaviest rain fell across Monterey, Townsend, Montour Falls, Beaver Dams, Watkins Glen, and Odessa. The heavy rain caused flash flooding that closed many roads, and created several mudslides. In the Town of Dix, just west of Watkins Glen International Speedway, a bridge was washed out on County Route 16. Estimated property damage: \$3 million.
- April 2-3, 2005, Beaver Dams – A slow moving storm from the Ohio Valley brought 1 to 4 inches of rain over two days. Before this storm, streams had high flows due to a previous rainstorm and snowmelt. There were some road closures and flooded basements. A few streams and creeks came out of their banks. Estimated property damage: \$50,000.
- September 7-8, 2011 – Remnants of Tropical Storm Lee with heavy rain caused minor flooding in the western side of Schuyler County. Road flooding was reported on State Route 14 between Watkins Glen and Montour Falls. One lane is covered for about 100 feet. Several homes in Odessa, Mecklenburg, Burdett, and Montour Falls had to have their basements de-watered. One resident of the village of Odessa was electrocuted in her basement as she attempted to operate the basement sump-pump.

CHANGES IS DEVELOPMENT

The Village of Montour Falls has not experienced significant changes in development, particularly in hazard-prone areas. The Village worked with NYS DOT to improve the curbing and stormwater runoff along NYS Rt 14, which has had a positive impact on limiting flooding along this road. In addition, the Village is in the process of purchasing the property next to its marina, which would allow for the expansion of the marina's capacity.

|VILLAGE OF MONTOUR FALLS|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>Village offices, fire department, highway department, public works and utilities could be impacted from a variety of hazards. Consideration must also be given to Schuyler Hospital and the county and state offices within Montour Falls. Transportation infrastructure, including roads and bridges are also at risk</p>	<p>Costs of full losses to the village office building, highway department, or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the highway department or fire department if all equipment was inside.</p> <p>Damages and impacts to a total loss of water and waste water infrastructure can cost millions.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Montour Falls has 151 parcels within the 100 year floodplain valued at over \$20M. The floodplain surrounds the Catharine Creek and impacts a variety of land uses. While the Catharine Creek Wildlife Management Area comprises much of the floodplain, a great deal of Montour Falls is threatened by flooding.</p> <p>Schuyler County Human Services Complex and B.C. Cate Elementary School which is part of the Odessa Central School District.</p> <p>Zoning laws are in place which prohibit development in floodplain areas. Much of the buildings and housing stock within the Village, including those within the floodplain are old, making mitigation efforts challenging. Significant flood containment and channeling efforts have taken place historically in Montour Falls and must continue.</p>	<p>The Village of Montour Falls has experienced significant flood-related losses in the past 16 years, totaling millions of dollars in damages to roads, homes, and infrastructure, including their wastewater treatment plant.</p> <p>Damages to roadways and vulnerable structures could approach \$10M.</p> <p>Continued water diversion and drainage challenges. Development of a new wastewater treatment plant. Making the County Social Services building more resilient to flooding impacts.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	The aged infrastructure of Montour Falls coupled with the population density has caused the Village to see moderate damages from winds to structures, and utilities. Significant threat lies with mobile homes. Montour Falls records 13 mobile homes identified as the primary structure on properties, including those within two parks.	In the past 16 years within the Village, there has been damage to structures and utilities, totaling in the tens of thousands of dollars. Future potential damages are likely to remain under \$100,000 per occurrence.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also	County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Damages to Montour Falls could enter the hundreds of thousands of dollars from a severe storm. Property damages and injuries associated with motor vehicle accidents are not included in these figures	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	The risk of landslide in the Village of Montour Falls is low.	No significant landslides have occurred in Schuyler County. While a slight risk of fluvial erosion exists from Catharine Creek, damages would be very localized and minimal, ranging in the tens of thousands of dollars at most.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No municipal data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze pose the most significant hazard within Montour Falls.	Water line freeze damage would be isolated and minimal. The impacts of frozen water mains, however, can be more costly both in direct repairs as well as those serviced by the water system. Impacts are generally of short duration.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads, municipal buildings and the school would suffer the highest impacts. Many buildings in Montour Falls are old, some in disrepair. These are likely to suffer the worst damages. Also at risk are the water and waste water systems.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	A drought is only likely to have an impact on the Village of Montour Falls if water levels drop below intakes for the water and wastewater systems, which is highly unlikely..	Agriculture within the village is limited and impacts would be within thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Only small wild areas within village limits hold the only potential for wildfire. All land mass within Montour Falls is easily accessible, resulting in a quick response and containment of any fires that start.	There have been no significant historical occurrences of wildfire in Montour Falls. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Major Fire	<p>Municipal buildings and businesses.</p> <p>Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.</p>	<p>While there is no history of major fires in Montour Falls, the higher density of buildings, including those aged and less likely to provide common mitigative measures against fires, leads to an elevated risk in the Village. Impacts could range into the high hundreds of thousands of dollars or the low millions of dollars for a major fire.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
MAN-MADE RISKS			
Cyber Attack	<p>The greatest threat to cyberattack lies with the Village municipal offices and businesses within the village</p> <p>Cyberattacks to the county social services building and Schuyler Hospital could be devastating, resulting in loss of patient and client data, which can delay patient treatment and client services, endangering the lives and wellbeing of many.</p>	<p>Cyberattack is only likely to result in loss of data and computer hardware. The relative increase of infrastructure in Montour Falls compared to other jurisdictions within the county elevate the hazard for the Village. Village operations, including wastewater treatment, can be susceptible to cyberattack. Potentially, the impact to SCADA systems can cause tens of thousands in damages.</p> <p>The potential impacts to businesses and industry in the Village is also high, with a high risk of financial losses to these entities.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release - In Transit	<p>A great deal of hazardous materials passes through the Village of Montour Falls daily. The heaviest route is NY State Route 14, along with NY State Route 224 and 414. Additionally, County Roads 8, 16, and 31 provide critical connections within and through Montour Falls.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p> <p>In addition to materials moving through the Village, propane and heating oil are common on local roads.</p>	<p>The larger quantities of hazardous materials transported along the routes identified lead to a higher threat and impact to the Village along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>The prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported throughout the Village.</p> <p>Damages could exceed \$10M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release- Fixed Site	<p>Fixed hazardous materials are limited to certain businesses, small farms, and the fire department.</p>	<p>The risk of fixed site hazardous materials incidents in Burdett is extremely limited and is typically associated with LPG and fuel. Damages are likely to remain contained to the tens of thousands at the highest thresholds</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Active Shooter	<p>The Village of Montour Falls has an elevated risk of active shooter incidents given the population centers and activity within the village. Village municipal buildings, the County Social Services building, the State Police station, Schuyler Hospital, the school, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an active shooter event.</p> <p>Active and passive security methods can aid in deterring shooters and minimizing impacts.</p> <p>Employees should be trained in workplace violence and active shooter survival techniques.</p> <p>Public safety personnel should continue to be trained in active shooter response</p>	<p>The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.</p> <p>An active shooter event in a more populated area lends to the likelihood of an increase in injuries and fatalities.</p>	<p><u>Unknown</u> - There is no way of predicting the probability of an active shooting,.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage</p>

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Pandemic	<p>The risk and vulnerability of a pandemic is elevated in the Village of Montour Falls, driven by the higher population density, increased commerce, mass gatherings, and Schuyler Hospital.</p> <p>The highest infrastructure threats are to Schuyler Hospital, municipal and county government employees, school, and businesses.</p>	<p>Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu.</p> <p>While Schuyler Hospital would be heavily relied upon by Schuyler County residents in the event of a pandemic, significant portions of the hospital's operations could be impacted, to the extent of shut down, from a pandemic. Illness and social distancing would severely impact county and local government operations within the Village, and would likely impact many businesses and cause mass gatherings to be canceled. The economic impact of a pandemic on the Village of Montour Falls and Schuyler County as a whole could result in millions of dollars of losses.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Major Transportation Accident	<p>Major transportation accidents along NY State Routes 14, 224, and 414 are of greatest concern. Additionally, transportation accidents along County Roads 16 and 31, both access roads to the hospital, are of significant concern.</p>	<p>While damages are likely to be localized to the incident site, the cascading impacts of a major transportation accident can be more severe to not only the Village of Montour Falls, but also Watkins Glen and other areas. Major transportation accidents impact both health and economics.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The Village of Montour Falls has an elevated risk of biological agent release incidents given the population centers and activity within the village. Village municipal buildings, the County Social Services building, the State Police station, Schuyler Hospital, the school, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of a biological release	While not likely to directly impact any structures in the village, a biological agent release could be devastating to lives and overwhelming to the emergency medical system and to Schuyler Hospital. A biological agent introduced into the water system can result in shutting down the water system for a long period of time, costing hundreds of thousands of dollars in decontamination and water provisions for those served by the water system.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
IED	The Village of Montour Falls has an elevated risk of IED incidents given the population centers and activity within the village. Village municipal buildings, the County Social Services building, the State Police station, Schuyler Hospital, the school, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an IED.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages. An IED event at a mass gathering can result in dozens of fatalities and injuries, overwhelming the EMS and hospital systems.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
RDD	The Village of Montour Falls has an elevated risk of RDD incidents given the population centers and activity within the village. Village municipal buildings, the County Social Services building, the State Police station, Schuyler Hospital, the school, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an RDD.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination. An RDD event at a mass gathering can result in dozens of fatalities and injuries. When coupled with decontamination, this would immediately overwhelm local EMS and healthcare systems	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Animal Disease	There is no notable livestock in the Village.	N/A	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF MONTOUR FALLS|

TABLE 63: Village of Montour Falls - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Internet Connectivity Failure	Municipal and county buildings, the school and businesses.	<p>While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems.</p> <p>Internet/communications failures can severely impact the operations of Schuyler Hospital, impacting patient care, as well as the Schuyler County Social Services building, impacting the wellbeing of clients. While these are only likely to cause delays in service, some harmful effects could emerge.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Sustained Power Outage	Municipal buildings and businesses, the school, and Schuyler Hospital	Some municipal structures and businesses have emergency power generation, which limits losses and impact.	<p><u>Unlikely</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
IND	Municipal buildings.	Damages would be in the millions for such a catastrophic event.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Natural Gas/ Propane Storage	Local filling stations, village municipal buildings.	This hazard, in Montour Falls, is similar to that of fixed facility hazardous materials. Damages would be generally limited to the low hundreds of thousands of dollars at the highest	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF MONTOUR FALLS|

HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Village of Montour Falls. The hazard mitigation goals for Schuyler County and the Village of Montour Falls are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

VILLAGE OF MONTOUR FALLS

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

|VILLAGE OF MONTOUR FALLS|

HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Dix, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: VILLAGE OF MONTOUR FALLS			
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR IN THE VILLAGE HALL			
Project Number	A.1.7.n		
Hazard Mitigation Planning Goal[s]	A, C, D, J, L		
Project Category [POETE]	Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Critical Facilities		
Description of Problem	The Village of Montour Falls Village Hall does not have a backup power source.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Replacement of failed emergency 15kw generator and switchgear at Village Hall with new natural gas generator, battery packs, or hybrid system.		
Is this Project Related to a Critical Facility	Yes	X	No
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will greatly improve the resiliency of the facility and their ability to maintain operations and maintenance of their equipment during a sustained power outage.
Useful Life	15+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Montour Falls Public Works Department		
Coordinating Agencies	Village of Montour Falls Government		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Village Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Evacuation and relocation of government operations in the event of a sustained power outage.	<\$50,000	Not Recommended - Not a practical solution as it severely impacts continuity of operations for the town.
	Procure and install emergency generator	>\$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|VILLAGE OF MONTOUR FALLS|

JURISDICTION: VILLAGE OF MONTOUR FALLS			
PROJECT NAME: INCREASE FLOOD PROTECTION AT VILLAGE WELL SITE			
Project Number	B.1.7.a		
Hazard Mitigation Planning Goal[s]	A, C, D, J, L		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	There is currently inadequate flood Protection at Village Well Site		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Flood protection at Village well site [engineer's evaluation, stream clearing, levee design and improvements, permitting]		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	Low - This work will reduce volatility of the Village drinking water during flood events.
Useful Life	15+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Montour Falls Public Works Department		
Coordinating Agencies	Southern Tier Regional Planning Board, Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2026
Estimated Time Required for Project Implementation	2-3 Years	Project Funding Sources	Hazard Mitigation Grants, USDA Grant, Village Budget
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Conduct engineering evaluation without implementation at completion of study	\$50,000 - \$99,999	Not Recommended
	Conduct engineering evaluation and implement recommended mitigation measures.	\$500,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|VILLAGE OF MONTOUR FALLS|

JURISDICTION: VILLAGE OF MONTOUR FALLS			
PROJECT NAME: LEVEE RECERTIFICATION			
Project Number	B.1.7.b		
Hazard Mitigation Planning Goal[s]	B, C, D, E, I, J, L		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The levee system in Montour Falls will need to be reaccredited in order to maintain FEMA recognition as meeting compliance at reducing flooding risks.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Accreditation of a levee system involves the gathering of data and documentation that will demonstrate that the existing system meets or can meet and be in compliance with the NFIP 44 CFR 65.10 requirements. Compliance with NFIP 44 CFR 65.10 allows FEMA to recognize a levee system provides a 1 percent-annual-chance flood reduction for the community, and areas on the landslide [protected side] of the levee system may be mapped as Zone X on the FIRM's		
Is this Project Related to a Critical Facility	Yes	X	No
Level of Protection	N/A	Estimated Benefits	High - The levee system protects against damage to the surrounding area and heightening the flood hazard.
Useful Life	25+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Montour Falls Public Works Department		
Coordinating Agencies	Southern Tier Regional Planning Board, FEMA		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	2 years	Project Funding Sources	Hazard Mitigation Grants, FEMA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Complete Levee Recertification	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|VILLAGE OF MONTOUR FALLS|

JURISDICTION: VILLAGE OF MONTOUR FALLS			
PROJECT NAME: OWEGO STREET FLOODING MITIGATION			
Project Number	B.1.3.cc		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	<p>Owego Street is a primary residential street located on the west side of the Village. The street generally runs northwest to southeast and contains approximately 51 residences. It is estimated the current street design was constructed in the 1950's and has been said that the street was once the primary arterial road through the Village until the construction of NYS Rte. 14. The street has only seen occasional maintenance/repairs as needed through the years. A noticeable trait, unique to Owego Street [the section from W. South Street to Mary Layton Dr.], is that it was constructed with concrete gutters in lieu of traditional curbing. The gutters are ineffective at removing stormwater and are often clogged. This leads to localized flooding often.</p>		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Upgrade stormwater infrastructure on Owego Street to reduce flooding hazards.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Reduction in flood damage
Useful Life	20+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Montour Falls Public Works Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Local Budget, Hazard Mitigation Funds, FEMA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Secure funding to complete the necessary stormwater infrastructure improvements on Owego St.	>\$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|VILLAGE OF MONTOUR FALLS|

JURISDICTION: VILLAGE OF MONTOUR FALLS			
PROJECT NAME: VILLAGE WIDE STORMWATER INFRASTRUCTURE IMPROVEMENT			
Project Number	B.1.3.dd		
Hazard Mitigation Planning Goal[s]	C, D, E, F, G, K		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The stormwater infrastructure in the village is deteriorating and need to be upgraded/replaced.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Village-wide drainage improvements [engineer's evaluation, upsizing/replacement of culverts, ditch clearing, levee improvements]		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - This project will allow better passage of water during flooding, making flood water less prone to create damages to structures and undermine roadways.
Useful Life	25+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Montour Falls Public Works Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	12-18 months	Project Funding Sources	Local Budget, Hazard Mitigation Funds, FEMA Grants
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Secure funding to complete the necessary stormwater infrastructure improvements	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

|VILLAGE OF MONTOUR FALLS|

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VILLAGE OF ODESSA

This section presents the jurisdictional annex for the Village of Odessa. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Village of Odessa; an assessment of the Village of Odessa's risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

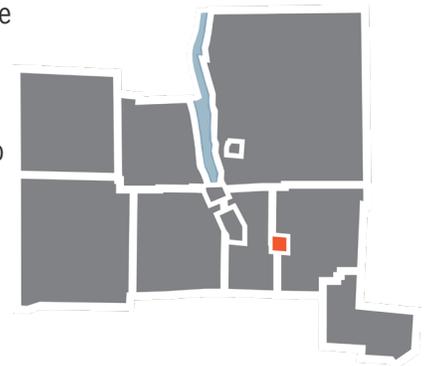
CONTACT	CONTACT INFORMATION
Department of Public Works Superintendent Steven Siptrott	Address: 105 1st Street, NY 14891 Phone: [607] 857-6426 Email: Scsc857@yahoo.com
Code Enforcement Officer Harold Russell	Address: 300 E. Main Street, Odessa, NY 14869 Cell: [607] 481-8663
Village Mayor Pamela P. Kelly	Address: 300 E. Main Street, Odessa, NY 14869 Phone: [607] 594-2100 Email: mayorofodessa@gmail.com

VILLAGE PROFILE

The Village of Odessa is situated along the western border of the Town of Catharine, and the eastern border of the Town of Montour. However, it acts as a gateway village to the larger Villages of Watkins Glen and Montour Falls, as travelers taking Route 224 to the Watkins Glen International Speedway or the Town of Hector's wine trail pass through Odessa by the tens of thousands each summer. Having a central location within the County, Odessa is also just minutes from Schuyler County's popular attractions and is home to a seat of one of the County's three school districts. The Village of Odessa is governed by an elected Mayor and a four-person Board of Trustees.

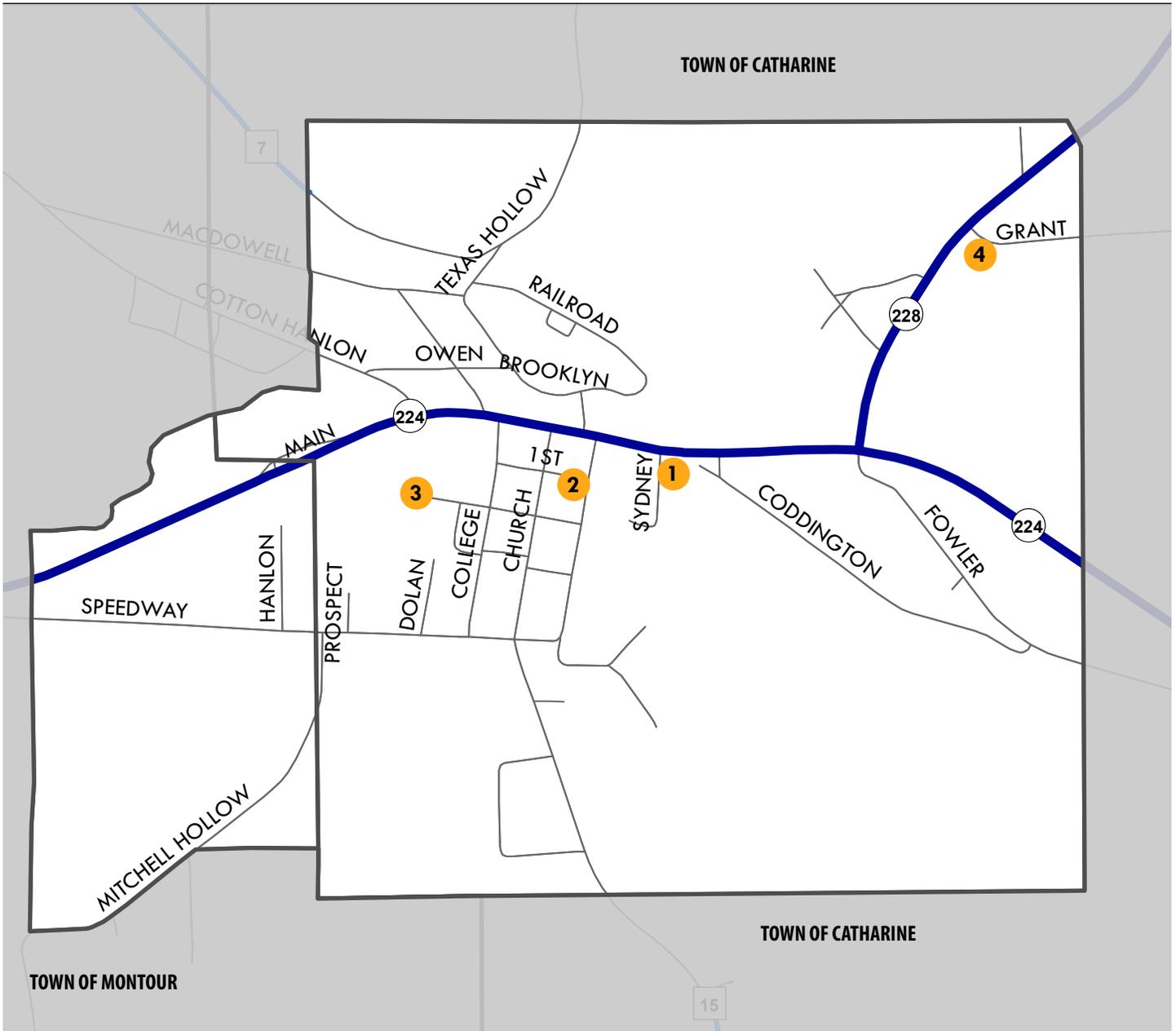
In 1827, Phineas Catlin and John Foster were responsible for plotting and surveying Odessa. Foster named the Village of Odessa in the years following and erected the first tavern and general store by 1836 and 1838 respectively. The first sawmill was erected in 1799, adjacent to Catlin Creek. This area would become the first set of boundaries for what are now the limits of Schuyler County. The first gristmill was built in 1801, followed many years later by the first schoolhouse circa 1825. The poultry business was a major source of revenue for the Village in its early years, as there were an estimated 20,000 laying hens within Odessa's limits during the 1930s.

Today, Odessa is a charming, quiet village with a few local amenities that provide food and goods to the neighboring rural areas. Yet, the Village faces several economic challenges. As a smaller village in the County, Odessa faces difficulties in terms of gaining revenue, stimulating economic development, and tapping into human capital resources.

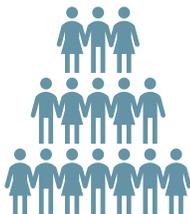


[VILLAGE OF ODESSA]

FIGURE 40: Town of Catharine Critical Facilities



LAND AREA
 Land: 1.2 sq/mi
 Water: 0 sq/mi
 Density: 430 people/sq mi



POPULATION
 2020: 517
 [-12.5% Change]
 2010: 591
 Median Age: 51.3



MEDIAN HOUSEHOLD INCOME
 \$56,136



MEDIAN HOME VALUE
 \$120,600



POVERTY RATE
 9.5%



EMPLOYMENT RATE
 64.1%
 Average Commute
 24.5 mins

|VILLAGE OF ODESSA|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

TABLE 64: Village of Odessa Critical Facilities				
MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Village Hall	300 E. Main Street, Odessa, NY 14869	No	No
2	Department of Public Works	105 1st Street, Odessa, NY 14869	No	No
1	Odessa Fire Department	300 E. Main Street, Odessa, NY 14869	Yes	No
3	Odessa Central School	300 College Ave, Odessa, NY 14869	Yes	No
4	Catharine Highway Department	106 Grant Road, Odessa, NY 14869	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Village of Odessa does not have any designated emergency evacuation routes but State Route 224 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The following is a list of potential shelter locations within the Village. In the event that sheltering is needed shelters will be determined at the time of an emergency and the Village will work with the Town and County to identify the locations and notify residents.

SHELTER NAME	ADDRESS	CAPACITY	ACCOMMODATES PETS?	ADA COMPLIANT?	BACK UP POWER	SERVICES PROVIDED
Odessa Central School	300 College Ave	540	No	Yes	Yes	N/A

Temporary Housing

The Village of Odessa has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Town will work with the County to find suitable locations.

Permanent Housing

The Village of Odessa recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Village of Odessa does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Village and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Village and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

|VILLAGE OF ODESSA|

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Village of Odessa and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	No	-	
Zoning Code	Yes	06/2002	Village Board/ Zoning Board of Appeals
Subdivision Regulations	No	-	
Site Plan Review	Yes	06/2002	Village Board
Flood Damage Prevention Law	Yes	12/1987	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Village of Odessa

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	No	
Environmental Board/ Commission	No	
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Village Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

FISCAL CAPABILITY

The table below summarizes financial resources available to the Village of Odessa.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community development Block Grants [CDBG, CDBG-DR]	Yes, None currently
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	None at this time

|VILLAGE OF ODESSA|

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 65: NFIP Policy Statistics [FEMA, 2021]			
COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Village of Odessa	0	\$0	\$0

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Village's greatest hazard of concern is flooding, although this tends to occur in limited areas around the Village. These areas are primarily the Beaver Dams area in the south western corner of town and along the creeks that flow into Watkins Glen and Montour Falls. Areas along Vanzandt Hollow Road and Cronk Road require stream bank reinforcement to prevent against fluvial erosion. The Town is also seeking funds for a new excavator which would be largely used for projects such as road and ditch maintenance and other flood control work.

TABLE 66: NOAA NCDC Storm Event Database -2000-2020 [2020]			
LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Burdett	6/27/2006	Flash Flood	\$ 15,000.00
Odessa	7/16/2019	Thunderstorm Wind	\$ 10,000.00

Description of Past Occurrences

- June 27, 2006 - Heavy rains caused flash flooding along Route 414 in Burdett, Odessa and the Town of Hector.

CHANGES IS DEVELOPMENT

The Village of Montour Falls has not experienced significant changes in development, particularly in hazard-prone areas. The Village worked with NYS DOT to improve the curbing and stormwater runoff along NYS Rt 14, which has had a positive impact on limiting flooding along this road. In addition, the Village is in the process of purchasing the property next to its marina, which would allow for the expansion of the marina's capacity.

|VILLAGE OF ODESSA|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>Village offices, fire department, public works and utilities could be impacted from a variety of hazards. Consideration must also be given to the school district. Transportation infrastructure, including roads and bridges are also at risk.</p>	<p>Costs of full losses to the village office building, public works, or fire department would include replacement of the structures and contents, which could cost up to several hundred thousand dollars for the public works facility, or the fire department if all equipment was inside.</p> <p>Damages and impacts to a total loss of public water infrastructure can result in costs in the hundreds of thousands of dollars. Likewise, severe structural damages to the school buildings could also total in the high hundreds of thousands to the low millions.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Odessa has only 32 parcels within the 100 year floodplain valued at just over \$2M. The floodplain surrounds the Catlin Mill Creek impacting some residential land uses, but mostly agricultural properties.</p> <p>The only infrastructure endangered by flooding is roads and bridges.</p> <p>Much of the area within the floodplain is farm land, minimizing losses. The Village does utilize zoning to address development concerns.</p>	<p>The Village of Odessa has suffered some losses due to flooding, mostly along the Catlin Mill Creek, including flooding of basements and the loss of a life due to electrocution in September of 2011 from the remnants of Tropical Storm Lee.</p> <p>Damages to roadways and vulnerable structures is likely to remain under \$500,000 per occurrence.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF ODESSA|

TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	Significant threat lies with mobile homes. Odessa records 18 mobile homes identified as the primary structure on properties, including those within a park.	In the past 16 years within the Village, there has been limited damage to structures and utilities, each totaling in the thousands of dollars. Future potential damages are likely to remain under \$100,000 per occurrence.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Severe Ice Storm/ Winter Storm	Ice and winter storms pose the highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.	County-wide in the last 10 years there has only been \$5,000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Damages would likely range within the tens of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures.	<u>Highly Likely Probability</u> - Event is probable in the next year <u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Landslide	The risk of landslide in the Village of Odessa is low.	No significant landslides have occurred in Schuyler County. Any potential damages, typically caused by fluvial erosion near the Catlin Mill Creek would be very localized and minimal, ranging in the tens of thousands of dollars at most.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Hurricanes/ Tropical Storms	Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard.	The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No municipal data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze and agricultural impacts pose the most significant hazard within Odessa.	Water line freeze damage would be isolated and minimal. The impacts of frozen water mains, however, can be more costly both in direct repairs as well as those serviced by the water system. Impacts are generally of short duration. Impacts could range into the tens of thousands at the highest limits. While there is some agriculture within village limits, this is generally limited to lower value crops.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads and municipal buildings would suffer the highest impacts. Also at risk is the water system.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	The most significant impact of drought would be to the limited agriculture in the village.	Agriculture within the village is limited and impacts would be within thousands of dollars.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Only small wild areas within village limits hold the only potential for wildfire. All land mass within Odessa is easily accessible, resulting in a quick response and containment of any fires that start.	There have been no significant historical occurrences of wildfire in Odessa. Damages are likely to be limited to thousands of dollar	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Major Fire	<p>Municipal buildings, the school district, and businesses.</p> <p>Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.</p>	<p>While there is no history of major fires in Odessa, the higher density of buildings in the center of village and on school district property leads to an elevated risk in the Village. Impacts could range into the high hundreds of thousands of dollars or the low millions of dollars for a major fire.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
MAN-MADE RISKS			
Cyber Attack	<p>The greatest threat to cyberattack lies with the Village municipal offices, businesses, and the school district.</p>	<p>Cyberattack is only likely to result in loss of data and computer hardware.</p> <p>The potential impacts to businesses and the school district can lead to data loss and potential financial impacts.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release - In Transit	<p>Some hazardous materials are transported through the Village, mostly along State Routes 224 and 228, which intersect in the eastern side of the village, and along County Road 15, which intersects with State route 224 in the center of the village.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p> <p>The prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported throughout the Village.</p>	<p>The larger quantities of hazardous materials transported along the routes identified as well as the higher population and population density lead to a higher threat and impact to the Village along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lend to a higher potential for loss of life and damages.</p> <p>Damages could exceed \$1M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

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TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release- Fixed Site	Fixed hazardous materials are limited to certain businesses, water treatment facilities, the fire department, and the school district.	The risk of fixed site hazardous materials incidents in Odessa is extremely limited and is typically associated with LPG and fuel. Damages are likely to remain contained to the tens of thousands at the highest thresholds.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Active Shooter	The Village of Odessa has an elevated risk of active shooter incidents given their concentrated population and the prominence of school buildings.	The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal. An active shooter event in a more populated area lends to the likelihood of an increase in injuries and fatalities.	<u>Unknown</u> - There is no way of predicting the probability of an active shooting,. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage
Pandemic	The risk and vulnerability of a pandemic is elevated in the Village of Odessa, driven by the higher population density and the prominence of the school district.	Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu. The economic impact of a pandemic, particularly considering the high employment rate of the population with the school district, could be significant to the village.	<u>Likely Probability</u> - Event is probable in the next three years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Major Transportation Accident	Major transportation accidents along NY State Routes 224 and 228, which intersect in the eastern side of the village, and along County Road 15, which intersects with NY State Route 224 in the center of the Village, are of greatest concern.	Damages are likely to be localized to the incident site. Major transportation accidents impact both health and economics.	<u>Likely Probability</u> - Event is probable in the next three years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The Village of Odessa could have an elevated risk of biological agent release incidents given the prominence of the school district.	<p>While not likely to directly impact any structures in the village, a biological agent release could be devastating to lives and overwhelming to the emergency medical system.</p> <p>A biological agent introduced into the water system can result in shutting down the water system for a long period of time, costing hundreds of thousands of dollars in decontamination and water provisions for those served by the water system.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
IED	The Village of Odessa has an elevated risk of IED incidents given the prominence of the school district.	Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages. Mass gathering locations could see injuries and losses of life in the dozens.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
RDD	The Village of Odessa has an elevated risk of RDD incidents given the prominence of the school district.	Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages and decontamination.	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Animal Disease	There is little notable livestock in the Village to be impacted by such an event.	N/A	<p><u>Likely Probability</u> - Event is probable in the next three years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

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TABLE 67: Village of Odessa - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Internet Connectivity Failure	Municipal buildings, the school district, and businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems. Internet/communications failures can severely impact the operations of the school district, both as an impediment to learning, but also to regular school operations. Impacts are generally not regarded as posing any harm, however.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Municipal buildings and businesses, school district.	Some municipal structures and businesses, as well as the school district, have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations, municipal buildings, school district	This hazard in Odessa is similar to that of fixed facility hazardous materials. Damages would be generally limited to the low hundreds of thousands of dollars at the highest extent	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Village of Odessa. The hazard mitigation goals for Schuyler County and the Village of Odessa are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

|VILLAGE OF ODESSA|

When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Town of Dix, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: VILLAGE OF ODESSA				
PROJECT NAME: PROCURE AND INSTALL EMERGENCY GENERATOR VILLAGE WATER SYSTEM				
Project Number	A.1.7.0			
Hazard Mitigation Planning Goal[s]	A, C, D, J, L			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Critical Facilities			
Description of Problem	The pumps that operate the Village water system do not have a source of back up power.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Install generator a each pump house.			
Is this Project Related to a Critical Facility	Yes	X	No	
Level of Protection	N/A	Estimated Benefits	High - An emergency generator permanently installed will provide potable water and fire hydrant use during sustained power outages.	
Useful Life	15+ years			
Estimated Cost	High >\$100,000			
PLAN FOR IMPLEMENTATION				
Lead Agency	Village of Odessa Public Works Department			
Coordinating Agencies	Village of Odessa Government			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024	
Estimated Time Required for Project Implementation	1 month	Project Funding Sources	Hazard Mitigation Grant, USDA Grant, Village Budget	
Local Planning Mechanisms to be Used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Procure and install emergency generator	<\$100,000	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: VILLAGE OF ODESSA			
PROJECT NAME: MILL CREEK STABILIZATION			
Project Number	B.1.3.ee		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	Mill Creek needs to be cleared and needs ditch stabilization to reduce flooding of adjacent parcels and roadway.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conduct Ditch Stabilization utilizing hydro-seeding, rock rip rap, flexi-mat and erosion control fabrics to stabilize steep highly eroded slopes that are impact road ways, and water quality.		
Is this Project Related to a Critical Facility	Yes		No X
Level of Protection	N/A	Estimated Benefits	Medium - Continue to address local roadway drainage and stormwater management issues
Useful Life	5-10 years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Village of Odessa Public Works Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, Village of Odessa Government		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023-2025
Estimated Time Required for Project Implementation	2 months	Project Funding Sources	Local Budget, Hazard Mitigation Funds
Local Planning Mechanisms to be Used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue Road Ditch Stabilization Program	<\$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

VILLAGE OF WATKINS GLEN

This section presents the jurisdictional annex for the Village of Watkins Glen. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the Village of Watkins Glen; an assessment of the Village of Watkins Glen's risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

CONTACT INFORMATION

CONTACT	CONTACT INFORMATION
Department of Public Works Superintendent Terry Wilcox	Address: 303 N. Franklin Street, Watkins Glen, NY 14891 Phone: [607] 535-9962 Cell: [607] 742-6871 Email: twilcox@watkinsglen.us
Code Enforcement Officer	Address: 303 N. Franklin Street, Watkins Glen, NY 14891 Phone: [607] 535-2736 Cell: [607] 742-6878 Email: codeenforcement@watkinsglen.us
Village Mayor	Address: 303 N. Franklin Street, Watkins Glen, NY 14891 Phone: [607] 535-2736 Email: mayor@watkinsglen.us

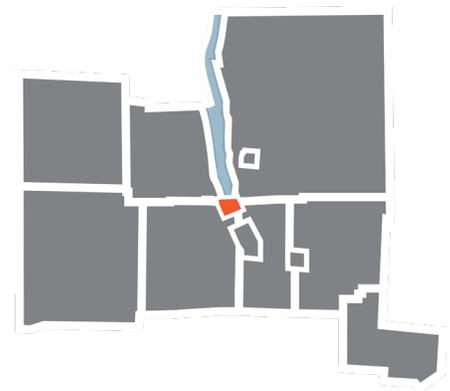
VILLAGE PROFILE

The Village of Watkins Glen is located at the foot of Lake Seneca, offering itself as a primary gateway to the central Finger Lakes region. The Village limits span a portion of Seneca Lake to the north, the northeastern corner of the Town of Dix, the southeastern corner of the Town of Reading, and share a border with the Town of Hector to the northeast. The Village of Watkins Glen is governed by an elected Supervisor and a four-person Board of Trustees.

Despite the urban nature of the Village, Watkins Glen also shares the expansive natural resources of Schuyler County. Catharine Creek, a one-of-a-kind freshwater nature preserve, leads from Seneca Lake's southern shore through the Village of Watkins Glen and continues across the Town of Montour into the Village of Montour Falls. Watkins Glen also hosts the entrance to Watkins Glen State Park, where gorgeous waterfalls and cliffs stretch into the Town of Dix along Glen Creek.

The Village gets its name from its founder Dr. Samuel Watkins, who arrived in 1828. He ordered the construction of a large hotel, which stood at the main intersection until 1977, bearing the name of Jefferson House. Originally called Salubria, the Village was renamed Watkins in 1851, to honor Dr. Watkins after his death. In 1926, Glen was added to the name to match the name of the local state park.

Today, Watkins Glen is focusing on the development of its downtown lakeside into a bustling destination center for visitors to the Finger Lakes. Watkins Glen is the heart of Schuyler County's administrative and economic vibrancy and is poised to lead the region as it matures.

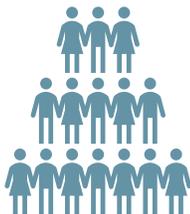


[VILLAGE OF WATKINS GLEN]

FIGURE 41: Village of Watkins Glen Critical Facilities



LAND AREA
 Land: 1.9 sq/mi
 Water: 0.4 sq/mi
 Density: 978
 people/sq mi



POPULATION
 2020: 1,863
 [+0.2% Change]
 2010: 1,859
 Median Age:
 39.5



MEDIAN HOUSEHOLD INCOME
 \$45,060



MEDIAN HOME VALUE
 \$128,800



POVERTY RATE
 14.8%



EMPLOYMENT RATE
 54.1%
 Average Commute
 19.8 mins

|VILLAGE OF WATKINS GLEN|

CRITICAL FACILITIES INFORMATION

CRITICAL FACILITIES

TABLE 68: Village of Watkins Glen Critical Facilities				
MAP ID #	FACILITY NAME	ADDRESS	BACK UP POWER	WITHIN FLOODPLAIN
1	Village Hall	303 N. Franklin Street, Watkins Glen, NY 14891	Yes	No
2	Village of Watkins Glen Department of Public Works/ Schuyler County Highway	910 S. Decatur Street, Watkins Glen, NY 14891	Yes	No
1	Watkins Glen Police Department	303 N. Franklin Street, Watkins Glen, NY 14891	Yes	No
3	Watkins Glen Fire Department	201 N. Perry Street, Watkins Glen, NY 14891	Yes	No
4	Schuyler County Sheriff's Department/ Public Safety Building	106 10th Street, Watkins Glen, NY 14891	Yes	No
4	Schuyler County Administration Building	105 Ninth Street, Watkins Glen, NY 14891	No	No
5	Catherine Valley Water Reclamation Facility	449 South Clute Park Road, Watkins Glen, NY 14891	Yes	No
6	Schuyler Volunteer Ambulance Corp.	909 S. Decatur Street, Watkins Glen, NY 14891	Yes	No
7	Watkins Glen Central School	301 12th Street, Watkins Glen, NY 14891	Yes	No
8	Schuyler County Public Health	160 S. Perry Street, Watkins Glen, NY 14891	Yes	No
9	Town of Dix Offices	304 7th Street, Watkins Glen, NY 14891	No	No

EVACUATION, SHELTERING, TEMPORARY HOUSING, AND PERMANENT HOUSING

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

The Village of Watkins Glen does not have any designated emergency evacuation routes but State Route 14 and 414 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event.

Sheltering

The following is a list of potential shelter locations within the Village. In the event that sheltering is needed shelters will be determined at the time of an emergency and the Village will work with the Town and County to identify the locations and notify residents.

SHELTER NAME	ADDRESS	CAPACITY	ACCOMMODATES PETS?	ADA COMPLIANT?	BACK UP POWER	SERVICES PROVIDED
Watkins Glen CSD	301 12th Street	1,100	No	Yes	Yes	N/A

|VILLAGE OF WATKINS GLEN|

Temporary Housing

The Village of Watkins Glen has not identified sites for the placement of temporary housing for residents displaced by a disaster. In the event temporary housing is needed, the Village will work with the County to find suitable locations.

Permanent Housing

The Village of Watkins Glen recognizes the importance of identifying long-term housing options for relocating displaced residents to maintain post-disaster social and economic stability. The Village of Watkins Glen does not currently own any property suitable for the permanent relocation of housing units or the construction of new housing units if property within the floodplain requires demolition. The Village and the County will coordinate to identify available vacant land outside of the floodplain and work with the displaced property owner to assist with finding acceptable new housing. If a parcel is not able to be identified and the property owner's only option is to rebuild their housing unit on their existing parcel, the Village and County will help determine what construction would be acceptable to be placed on the existing property utilizing best practice for development within a floodplain and NFIP policy standards.

CAPABILITIES ASSESSMENT

PLANNING/ZONING POLICIES

The table below summarizes the regulatory tools that are available to the Village of Watkins Glen and where hazard mitigation has been integrated.

	ADOPTED BY MUNICIPALITY	DATE	DEPARTMENT/ AGENCY RESPONSIBLE
Building Code	Yes	NA	Code Enforcement Officer
Comprehensive Plan	Yes	2012	Village Board/ Planning Board
Zoning Code	Yes	1/2022	Planning Board/ Zoning Board of Appeals
Subdivision Regulations	No	-	Code Enforcement Officer
Site Plan Review	Yes	1/2022	Planning Board
Flood Damage Prevention Law	Yes	8/1989	Code Enforcement Officer

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Village of Watkins Glen

RESOURCE	AVAILABLE [YES OR NO]	COMMENTS
Planning Board	Yes	5 members
Environmental Board/ Commission	No	
Planners or engineers with knowledge of land development and land management practices	None	Contracts with private planning/ engineering firm as necessary.
Engineers or professionals trained in building or infrastructure construction practices	No	Contracts with private engineering firm as necessary.
Planners or engineers with an understanding of natural hazards	No	
Staff with expertise or training in benefit/cost analysis	Yes	Village Board Members
Professionals trained in conducting damage assessments	No	
Surveyor[s]	No	
Grant writer[s]	No	Contracts as needed/ works with SCOPED
Resilience Officer	No	

|VILLAGE OF WATKINS GLEN|

FISCAL CAPABILITY

The table below summarizes financial resources available to the Village of Watkins Glen.

RESOURCE	ACCESSIBLE OR ELIGIBLE TO USE [YES/NO]
Community Development Block Grants [CDBG, CDBG-DR]	Yes
Capital improvements project funding	Yes, General Fund Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Other Federal or State Funding Programs	Yes

NATIONAL FLOOD INSURANCE PROGRAM [NIFP] SUMMARY

TABLE 69: NFIP Policy Statistics [FEMA, 2021]

COMMUNITY	POLICIES IN-FORCE	INSURANCE IN FORCE	PREMIUMS IN-FORCE + FPF
Village of Watkins Glen	6	\$2,360,000	\$4,778

SUMMARY OF HAZARD IDENTIFICATION UNIQUE HAZARD EVENT HISTORY/ IMPACT

The Village of Watkins Glen, situated in the valley and on Seneca Lake, rates flooding as their primary hazard. Shoreline erosion is also a concern for the Village which requested a mitigation project to install new shoreline erosion barriers along the lake shore and also inquired about the possibility of repairing the easternmost breakwater in Seneca Lake. This breakwater, it is believed, is owned by the New York State Canal Corporation.

TABLE 70: NOAA NCDC Storm Event Database -2000-2020 [2020]

LOCATION	DATE	EVENT	PROPERTY DAMAGE [USD]
Watkins Glen	6/6/2005	Thunderstorm Wind	\$ 10,000.00
Watkins Glen	11/29/2005	Flood	\$ 10,000.00
Watkins Glen	8/24/2007	Thunderstorm Wind	\$ 1,000.00
Watkins Glen	6/21/2008	Thunderstorm Wind	\$ -
Watkins Glen	5/16/2009	Thunderstorm Wind	\$ -
Watkins Glen	5/3/2010	Thunderstorm Wind	\$ 5,000.00
Watkins Glen	7/7/2012	Thunderstorm Wind	\$ 5,000.00
Watkins Glen	6/12/2015	Thunderstorm Wind	\$ 10,000.00
Watkins Glen	6/14/2015	Flash Flood	\$2,600,000.00
Watkins Glen	7/20/2017	Thunderstorm Wind	\$ 3,000.00
Watkins Glen	6/18/2018	Thunderstorm Wind	\$ 10,000.00

Description of Past Occurrences

- September 7-8, 2011 – Remnants of Tropical Storm Lee with heavy rain caused minor flooding in the western side of Schuyler County. Road flooding was reported on State Route 14 between Watkins Glen and Montour Falls. One lane is covered for about 100 feet. Several homes in Odessa, Mecklenburg, Burdett, and Montour Falls had to have their basements de-watered. One resident of the village of Odessa was electrocuted in her basement as she attempted to operate the basement sump-pump.
- July 20, 2017 - Flash flooding spilled across several streets in the Village of Watkins Glen and nearby county roads. There was a report of 2 feet of water in one intersection.

|VILLAGE OF WATKINS GLEN|

CHANGES IS DEVELOPMENT

The Village of Watkins Glen has experienced significant changes in development since the last update as a result of being awarded the Governors Downtown Revitalization Initiative - Round 2 winner and a major DOT road reconstruction project on Route 14 through the Village. The Village worked with NYS DOT to improve the curbing and stormwater runoff along NYS Rt 14, which has had a positive impact on limiting flooding along this road. Each DRI project that included new construction was required to build new buildings 2 feet above flood level. In particular, this addressed flooding at Captain Bills Boat Terminal, which frequently was impacted by flash flooding events off the side hill, and Clute Park. Within Clute Park, a new bathhouse and pavilion were constructed as well as a splash pad/ ice rink. As part of this project, three stormwater retention ponds were constructed. As a result, during high water during the summer/fall of 2021, the building and associated pedestrian sidewalks did not experience any flooding, while other parts of the park had significant standing water.

|VILLAGE OF WATKINS GLEN|

HAZARD IDENTIFICATION AND RISK ASSESSMENT

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
CRITICAL INFRASTRUCTURE			
Critical Infrastructure Failure	<p>Village offices, county offices, fire department, highway department, schools, EMS services, public works and utilities could be impacted from a variety of hazards. Consideration must also be given to industrial sites within the Village. Transportation infrastructure, including roads, rail, and bridges are also at risk.</p>	<p>Costs of full losses to the village office building, highway department, or fire department would include replacement of the structures and contents, which could range from several hundred thousand dollars into the millions for the highway department or fire department if all equipment was inside.</p> <p>A fire causing severe damage to the joint Schuyler County Highway Department and Watkins Glen Highway and Public Works building in 2013, causing substantial damage.</p> <p>Damages and impacts to a total loss of water and waste water infrastructure can cost millions</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
NATURAL RISKS			
Flooding	<p>Watkins Glen has 86 parcels within the 100 year floodplain valued at over \$40M. The floodplain comes off of Seneca Lake and surrounds the Catharine Creek and impacts a variety of land uses. While the Catharine Creek Wildlife Management Area comprises much of the floodplain, a great deal of Watkins Glen is threatened by flooding.</p> <p>All major facilities, including those of Schuyler County, the Village of Watkins Glen, and the Town of Dix are outside of the 100 year floodplain. The Schuyler County office building has been flooded historically, but not in recent years.</p>	<p>The Village of Watkins Glen has experienced significant flood-related losses in the past 16 years, totaling millions of dollars in damages to roads, homes, and infrastructure.</p> <p>Damages to roadways and vulnerable structures could approach \$10M.</p> <p>Zoning laws are in place which prohibit development in floodplain areas. The low lying geography through much of the Village, stemming from the southern shore of Seneca Lake and south along Catharine Creek, the wetland, and the canal pose significant challenges. A variety of aggressive flood containment and channeling efforts have taken place historically in Watkins Glen and must continue.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Severe Wind/ Tornado	<p>Older buildings in Watkins Glen coupled with the population density have caused the Village to see moderate damages from winds to structures and utilities.</p> <p>There are no mobile homes recorded in the Village of Watkins Glen</p>	<p>Little historical wind damage has occurred in the last 16 years within the Village, with few instances of minor property damage. Future potential damages are likely to remain under \$100,000 per occurrence</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Severe Ice Storm/ Winter Storm	<p>The highest threat to travelers on roadways and can threaten the integrity of poorly supported roofs. Loss of utilities can also result from downed lines.</p> <p>As a center of commerce and government for Schuyler County, the impacts of a severe ice/winter storm to Watkins Glen would be crippling, impacting local and county government operations and local businesses.</p>	<p>County-wide in the last 10 years there has only been \$5000 of recorded significant damages from winter storms, although the preceding decade reported over \$2.5M county-wide. The 15 year average trends \$170,000 county-wide. Damages would likely range within the tens of thousands of dollars. Property damages and injuries associated with motor vehicle accidents are not included in these figures.</p>	<p><u>Highly Likely Probability</u> - Event is probable in the next year</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Landslide	<p>The risk of landslide in the Village of Watkins Glen does have a slightly elevated risk of moderate incidence [see figure 24], particularly in steeper areas along the shore of Seneca Lake.</p>	<p>No significant landslides have occurred in Schuyler County. Some steep areas along the shore of Seneca Lake pose some hazard, but limited impacts. While a slight risk of fluvial erosion exists from Glen Creek, damages would be very localized and minimal, ranging in the tens of thousands of dollars at most.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Hurricanes/ Tropical Storms	<p>Roads and buildings within floodplains are most vulnerable to flooding which could be caused by a tropical storm. This threat is largely addressed under the Flooding hazard. Likewise, the impacts of wind are addressed under the Severe Wind/Tornado hazard</p>	<p>The last significant impact from a tropical storm was TS Agnes in 1972. County-wide damages from flooding were estimated at \$7.2M. No municipal data is available. Based on this, estimated losses for potential future occurrences could range from \$15 - \$20M county-wide.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> - Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Extreme Temperatures	Damages from water line freeze pose the most significant hazard within Watkins Glen.	Water line freeze damage would be isolated and minimal. The impacts of frozen water mains, however, can be more costly both in direct repairs as well as those serviced by the water system. Impacts are generally of short duration	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Earthquake	Roads and municipal buildings would suffer the highest impacts. Many buildings in Watkins Glen are old and are likely to suffer the worst damages. Also at risk are the water and waste water systems.	Although no earthquakes of significance have occurred historically, an incident can occur. Losses would be based on the magnitude and duration of an event and can vary. Annualized losses county wide, according to the NYS Hazard Mitigation Plan, are under \$25,000.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Drought	A drought is only likely to have an impact on the Village of Watkins Glen if water levels drop below intakes for the water and wastewater systems, which is highly unlikely.	Agriculture suffered the greatest impacts. Given the lack of significant agriculture in the Village, impacts would be minimal	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Wildfire	Only small wild areas within village limits hold the only potential for wildfire. All land mass within Watkins Glen is generally easily accessible, resulting in a quick response and containment of any fires that start.	There have been no significant historical occurrences of wildfire in Watkins Glen. Damages are likely to be limited to thousands of dollars.	<u>Occasional Probability</u> - Event is probable in the next five years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Major Fire	<p>Municipal buildings and businesses.</p> <p>Zoning rules applying minimum distances between structures can minimize exposure and spread. Business and industry must follow fire safety regulations.</p>	<p>Watkins Glen has the highest history of major fires within Schuyler County, including the joint use highway garage and a large block fire on Franklin Street. The higher density of buildings, including those aged and less likely to provide common mitigative measures against fires, leads to an elevated risk in the Village. Impacts could range into the high hundreds of thousands of dollars or the low millions of dollars for a major fire.</p>	<p><u>Occasional Probability</u> - Event is probable in the next five years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
MAN-MADE RISKS			
Cyber Attack	<p>The greatest threat to cyberattack lies with the Village municipal offices, utilities, county offices, school, and business and industry within the village.</p>	<p>Cyberattack is only likely to result in loss of data and computer hardware. The relative increase of infrastructure in Watkins Glen, compared to other jurisdictions within the county, elevate the hazard for the Village. Village operations, including water and wastewater treatment, can be susceptible to cyberattack. Potentially, the impact to SCADA systems can cause tens of thousands in damages.</p> <p>The potential impacts to businesses and industry in the Village is also high, with a high risk of financial losses to these entities.</p> <p>Cyberattacks to the county offices and school can result in the loss of essential data, which can delay services, but is not likely to have life threatening impacts</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Hazard Materials Release - In Transit	<p>A great deal of hazardous materials passes through the Village of Watkins Glen daily. The heaviest route is NY State Route 14, along with NY State Route 414.</p> <p>The Finger Lakes Rail line traverses through Watkins Glen from north to south. This rail line carries a multitude of hazardous materials through Watkins Glen.</p> <p>Development along the transportation corridors lead to a higher risk from impacts of hazardous materials in transit incidents.</p> <p>The prevalence of propane and heating oil will continue to drive the need for certain hazardous materials to be transported throughout the Village.</p>	<p>The larger quantities of hazardous materials transported along the routes identified as well as the higher population and population density lead to a higher threat and impact to the Village along these corridors.</p> <p>While the impacts of most hazardous materials incidents are localized, the quantities of hazardous materials as well as the higher population density around these corridors lead to a higher potential for loss of life and damages.</p> <p>Damages could exceed \$10M in these higher hazard areas, not including clean-up costs and environmental impacts, which could far exceed this amount</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.</p>
Hazard Materials Release- Fixed Site	<p>Fixed hazardous materials are limited to certain business and industry, water and waste water treatment facilities, the highway garage, and the fire department</p>	<p>The risk of fixed site hazardous materials incidents in Watkins Glen is extremely limited and is typically associated with LPG and fuel, although other hazardous materials are in use by certain industrial facilities. Damages are likely to remain contained to the tens of thousands at the highest thresholds.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Active Shooter	<p>The Village of Watkins Glen has an elevated risk of active shooter incidents given the population centers and activity within the village. Village municipal buildings, the County office buildings, schools, industrial sites, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an active shooter event.</p>	<p>The loss of even a single life is catastrophic. Typically, unless the shooting is coupled with arson or use of an IED, property damages are minimal.</p> <p>An active shooter event in a more populated area lends to the likelihood of an increase in injuries and fatalities.</p>	<p><u>Unknown</u> - There is no way of predicting the probability of an active shooting,.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Pandemic	<p>The risk and vulnerability of a pandemic is elevated in the Village of Watkins Glen, driven by the higher population density, tourist attractions, increased commerce, and mass gatherings.</p> <p>The highest infrastructure threats are to the school, municipal and county government, and business and industry.</p>	<p>Direct dollar losses are measured in healthcare expenses and loss of productivity. Health care expenses can vary based on the disease. As a baseline, the average person typically pays \$130 for a doctor visit and medication for the flu.</p> <p>Illness and social distancing would severely impact county and local government operations within the Village, and would likely impact many businesses and cause mass gatherings to be canceled. The economic impact of a pandemic on the Village of Watkins Glen and Schuyler County as a whole could result in millions of dollars of losses.</p> <p>County Public Health offices, located in the Village, would be significantly engaged in any type of contagious disease response</p>	<p><u>Likely Probability</u> - Event is probable in the next three years</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>
Major Transportation Accident	<p>Major transportation accidents along State Routes 14 and 414 are of greatest concern.</p> <p>The Finger Lakes Rail line also poses a significant hazard within the Village, particularly in regard to hazardous materials.</p> <p>Watkins Glen also has the largest marina for the southern portion of Seneca Lake, with a</p>	<p>While damages are likely to be localized to the incident site, the cascading impacts of a major transportation accident can be more severe to not only the Village of Watkins Glen, but also Montour Falls and other areas. Major transportation accidents impact both health and economics.</p> <p>Monitoring of vessels to be in compliance with US Coast Guard safety regulations is important to the prevention and mitigation of hazards associated with vessels on Seneca Lake.</p>	<p><u>Likely Probability</u> - Event is probable in the next three years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Biological Agent Release	The Village of Watkins Glen has an elevated risk of biological agent release incidents given the population centers and activity within the village. Village municipal buildings, county buildings, schools, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of a biological release	<p>While not likely to directly impact any structures in the village, a biological agent release could be devastating to lives and overwhelming to the emergency medical and healthcare systems.</p> <p>A biological agent introduced into the water system can result in shutting down the water system for a long period of time, costing hundreds of thousands of dollars in decontamination and water provisions for those served by the water system.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
IED	The Village of Watkins Glen has an elevated risk of IED incidents given the population centers and activity within the village. Village municipal buildings, county buildings, schools, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an IED incident.	<p>Losses from an IED would be localized, but severe, resulting in several hundred thousand dollars in damages.</p> <p>An IED event at a mass gathering can result in dozens of fatalities and injuries, overwhelming the EMS and hospital systems.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
RDD	The Village of Watkins Glen has an elevated risk of RDD incidents given the population centers and activity within the village. Village municipal buildings, county buildings, schools, certain businesses, and the variety of mass gathering events in the Village all increase both the risk and vulnerability of an RDD incident.	<p>Losses from an RDD would be localized, but severe, resulting in several hundred thousand dollars in damages.</p> <p>An RDD event at a mass gathering can result in dozens of fatalities and injuries, overwhelming the EMS and hospital systems.</p>	<p><u>Unlikely Probability</u> - Event is probable in the next ten years.</p> <p><u>Minor severity impact</u> - Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.</p>
Animal Disease	There is no notable livestock in the Village.	N/A	<p><u>Likely Probability</u> - Event is probable in the next three years.</p> <p><u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.</p>

|VILLAGE OF WATKINS GLEN|

TABLE 71: Village of Watkins Glen - Hazard Identification and Risk Assessment

HAZARD	HAZARD LOCATION AND TYPES/NUMBER FACILITIES	IMPACT OF HAZARD [LOCATION/ SEVERITY/ ECONOMIC]	PROBABILITY OF FUTURE EVENTS
Internet Connectivity Failure	Municipal buildings and businesses.	While financial losses would largely be limited to the private sector, losses of communications to areas of higher population can have greater impact, particularly in regard to emergency communications systems. Internet/communications failures can severely impact the operations of Schuyler County government, including the 911 center, which can have severe impact on lives.	<u>Unlikely Probability</u> - Event is probable in the next ten years <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
Sustained Power Outage	Municipal buildings, business and industry, schools, county offices.	Some municipal structures and businesses have emergency power generation, which limits losses and impact.	<u>Unlikely</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.
IND	Municipal buildings.	Damages would be in the millions for such a catastrophic event.	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Major severity impact</u> - Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed with major damage.
Natural Gas/ Propane Storage	Local filling stations and municipal buildings, schools, business and industry	This hazard, in Watkins Glen, is similar to that of fixed facility hazardous materials. Damages would be generally limited to the low hundreds of thousands of dollars at the highest extent	<u>Unlikely Probability</u> - Event is probable in the next ten years. <u>Limited severity impact</u> -Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

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HAZARD MITIGATION STRATEGY

The focus of the 2022 -2027 Schuyler County Hazard Mitigation Plan is to describe methodologies and projects to address the hazards that present the highest level of risk and potential losses to Schuyler County and the Village of Watkins Glen. The hazard mitigation goals for Schuyler County and the Village of Watkins Glen are listed below. Each goal is a general statement of what Schuyler County and its municipalities wish to achieve in order to reduce the community’s vulnerability to hazards. Some of the goals will reduce the County’s vulnerability to a broad range of hazards, while others are focused specifically on the top threats.

GOAL	DESCRIPTION	HAZARD TYPE
Goal A	Raise public awareness about hazards and how to respond.	All Hazards
Goal B	Conduct planning, training, and exercises needed to enhance response effectiveness.	All Hazards
Goal C	Maintain the viability of all critical facilities and operations, including data and computer networks.	All Hazards
Goal D	Protect new and existing development from flooding, erosion, and other hazards.	All Hazards
Goal E	Ensure that drainage from new construction and land use changes does not contribute to increased risks.	Flooding
Goal F	Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.	Flooding
Goal G	Protect roads from flooding and erosion damage.	Flooding
Goal H	Provide timely and reliable warning of floods, flash floods, and severe weather.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal I	Protect utilities from damage by trees and other debris as well as excavation damage.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal J	Require that buildings be designed to withstand high wind, heavy loads, and earthquakes.	Flooding, Severe Wind/Tornado, Severe Winter Storms
Goal K	Reopen transportation routes as quickly as possible.	All Hazards
Goal L	Monitor, prepare, and respond to public health threats.	Pandemic, Flooding, HazMat

For each mitigation goal, the committee assessed the local circumstances and reviewed mitigation alternatives in order to identify activities that are needed to achieve the goal. The strategies and recommended activities presented document that approach that Schuyler County and its municipalities intend to follow in order to reduce the local vulnerability to the high priority natural hazards. Due to limited local resources, funding is not currently available to implement all of the recommended activities. Fully achieving the goals set forth in the plan obviously requires an ongoing commitment to hazard mitigation with implementation of additional activities in future years and the active participation of all partners.

The hazard mitigation strategies listed on the following pages are the outcome of interactions with county and local stakeholders. The strategies identify first with the primary hazard addressed. Not all top hazards are explicitly identified, as several have mitigation actions addressed through either All Hazard strategies or strategies listed under other hazards.

Within each hazard, as applicable, are strategies identified by priority:

- Priority 1 – those actions which are to be initiated or maintained during the next five years, or
- Priority 2 – those actions which require further analysis during the next five years to determine the best course of action.

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When identifying priorities for projects, most jurisdictions primarily considered the costs associated with repetitive issues [such as frequent road washouts from an undersized culvert] as compared to the estimated costs of the hazard mitigation project [i.e. replacing the culvert with a larger and more resilient design].

Many strategies have several projects associated with them. Each project identifies the following:

- Lead Agency
- Timeframe for Completion
- Potential Funding Sources and Relative Cost
- POETE Capability Element [Planning, Organizing, Equipping, Training, Exercising]
- Implementation Notes
- Associated Hazard Mitigation Goals

BENEFIT/COST REVIEW

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to project implementation. These can include life safety, structure and infrastructure damage, loss of service or function, and economic and environmental damage and losses.

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using high, medium, and low ratings. Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:

COST	
High >\$100,000	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium \$50,000 to \$99,999	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low < \$50,000	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program
BENEFITS	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property
Low	Long-term benefits of the project are difficult to quantify in the short term.

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HAZARD MITIGATION ACTION WORKSHEETS

The following Hazard Mitigation Action Worksheets were completed with the input of officials from the Village of Watkins Glen, Schuyler County government, assisting organizations, and officials from local jurisdictions within Schuyler County. Collectively, they address all hazard mitigation planning goals identified in this plan.

JURISDICTION: VILLAGE OF WATKINS GLEN				
PROJECT NAME: REPLACE CONCRETE WALLS AT GLEN CREEK				
Project Number	B.1.3.ff			
Hazard Mitigation Planning Goal[s]	C, D, E, F, G			
Project Category [POETE]	Equipping			
RISK/VULNERABILITY				
Hazard of Concern	Flooding			
Description of Problem	The concrete walls presently lining Glen Creek within the Village are greatly deteriorated. Further aging of the walls will result in collapse and subsistence of the earth behind the walls into the creek, resulting in damage to the surrounding area and heightening the flood hazard by decreasing the depth of the channel.			
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION				
Description of the Solution	Replace ~1200 feet of the concrete wall along Glen Creek and increasing the height to 25 feet			
Is this Project Related to a Critical Facility	Yes		No	X
Level of Protection	N/A	Estimated Benefits	Low - Reduction in flood damage	
Useful Life	50+ years			
Estimated Cost	High >\$100,000			
PLAN FOR IMPLEMENTATION				
Lead Agency	Watkins Glen Public Works Department			
Coordinating Agencies	Schuyler County Soil and Water Conservation District			
Prioritization	Priority 1	Desired Timeframe for Implementation	2024 -2026	
Estimated Time Required for Project Implementation	4 months	Project Funding Sources	Hazard Mitigation Grants, CDBG	
Local Planning Mechanisms to be used in Implementation	N/A			
ALTERNATIVES CONSIDERED				
Alternatives	Action	Estimated Cost	Evaluation	
	No Action	\$0	Not Recommended	
	Replacing concrete walls at Glen Creek	> \$100,000	Recommended Alternative	
PROGRESS REPORT (FOR PLAN MAINTENANCE)				
Date of Status Report				
Report of Progress				
Update Evaluation of the Problem and/or Solution				

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JURISDICTION: VILLAGE OF WATKINS GLEN			
PROJECT NAME: CULVERT REPLACEMENT AND STREAM STABILIZATION ON BATH STREET			
Project Number	B.1.3.gg		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The stream along Bath Street is causing a potential catastrophic road failure on Bath Street due to stream erosion and a cross culvert outlet erosion		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Continue stream stabilization along Bath Street and replace and upgrade the cross culvert outlet.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Reduction in flood damage
Useful Life	20+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Watkins Glen Streets Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2025-2026
Estimated Time Required for Project Implementation	1 month Ongoing Stabilization Efforts	Project Funding Sources	Village Budget, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Continue stream stabilization efforts	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: VILLAGE OF WATKINS GLEN			
PROJECT NAME: STUDY FLOOD CONTROL STRUCTURES IN GLEN CREEK			
Project Number	B.1.3.hh		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	The sediment has increased to a point that they lack significant flood control or retention capacity within the flood control structures in Glen Creek.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conduct a study on the flood control structures in Glen Creek in the State Park. The outcome of the study will guide the reestablish of these valuable flood control sites.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - This work will reduce repetitive losses by addressing fluvial erosion, and both slowing stream velocity and providing area for floodwaters to dissipate. Risk to local roads and structures will be reduced.
Useful Life	1-5 years		
Estimated Cost	Low < \$50,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Watkins Glen Public Works Department		
Coordinating Agencies	Town of Dix Highway Department, Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2023 - 2025
Estimated Time Required for Project Implementation	12 months	Project Funding Sources	Village and Town Budgets, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Conduct study but do not move forward with implementation	< \$50,000	Not Recommended
	Conduct study and move forward with implementation	\$50,000 - \$99,999	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: VILLAGE OF WATKINS GLEN			
PROJECT NAME: CULVERT REPLACEMENT AND STREAM STABILIZATION AT SUMMIT AVE & HOWARD ST			
Project Number	B.1.3.ii		
Hazard Mitigation Planning Goal[s]	B, C, D, E, F, G		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding		
Description of Problem	During past flash flooding events the banks of the tributary of Seneca Lake and associated culverts where the creek passes under Summit Avenue and Howard Street have experienced significant failures that has resulted in flood damage to adjacent homes and roadways.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Conduct stream stabilization measures and upsize the culverts under Summit Avenue and Howard Street.		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - This work will reduce repetitive losses by addressing fluvial erosion, and both slowing stream velocity and providing area for floodwaters to dissipate. Risk to local roads and structures will be reduced.
Useful Life	15+ years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Watkins Glen Streets Department		
Coordinating Agencies	Town of Dix Highway Department, Schuyler County Soil and Water Conservation District		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024-2026
Estimated Time Required for Project Implementation	5 months	Project Funding Sources	Village and Town Budgets, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Complete only culvert replacement	\$50,000 - \$99,999	Not Recommended - will like still lead to flooding due to condition of stream banks
	Complete stream stabilization and culvert replacement	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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JURISDICTION: VILLAGE OF WATKINS GLEN			
PROJECT NAME: ADDRESS DETERIORATING BREAKWATERS			
Project Number	B.2.2.a		
Hazard Mitigation Planning Goal[s]:	B, C, D, F, G		
Project Category [POETE]	Planning and Equipping		
RISK/VULNERABILITY			
Hazard of Concern	Flooding, Shoreline Protection		
Description of Problem	Breakwaters near the southern end of Seneca Lake aid in protecting the shoreline from wave action and erosion. The breakwaters are decades old and have deteriorated significantly and are in need of significant repair to maintain their effectiveness.		
ACTION OF PROJECT INTENDED FOR IMPLEMENTATION			
Description of the Solution	Convene meetings with NYS Canal Corporation and U.S. Army Corp of Engineers to address the deteriorating condition of breakwaters in Seneca Lake		
Is this Project Related to a Critical Facility	Yes	No	X
Level of Protection	N/A	Estimated Benefits	Medium - Protecting the Seneca Lake shoreline
Useful Life	15 years		
Estimated Cost	High >\$100,000		
PLAN FOR IMPLEMENTATION			
Lead Agency	Watkins Glen Public Works Department		
Coordinating Agencies	Schuyler County Soil and Water Conservation District, NYS Canal Corporation, U.S. Army Corp of Engineers		
Prioritization	Priority 1	Desired Timeframe for Implementation	2024
Estimated Time Required for Project Implementation	12 months	Project Funding Sources	Village Budget, Hazard Mitigation Grants, other State and Federal Sources
Local Planning Mechanisms to be used in Implementation	N/A		
ALTERNATIVES CONSIDERED			
Alternatives	Action	Estimated Cost	Evaluation
	No Action	\$0	Not Recommended
	Convene meetings with NYS Canal Corporation to address the breakwaters in Seneca Lake	< \$50,000	Not Recommended
	Convene meetings with NYS Canal Corporation to address the breakwaters in Seneca Lake, and move forward with implementation measures to work toward fixing breakwaters	> \$100,000	Recommended Alternative
PROGRESS REPORT (FOR PLAN MAINTENANCE)			
Date of Status Report			
Report of Progress			
Update Evaluation of the Problem and/or Solution			

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