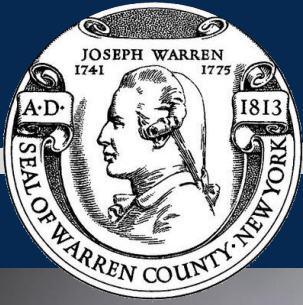


# HAZARD MITIGATION PLAN

Warren County, New York



VOLUME II



2023



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## SECTION 8. PLANNING PARTNERSHIP

This section provides a description of the Warren County's HMP update planning partnership, their responsibilities throughout the planning process, and the jurisdictional annexes developed from their plan update efforts.

### 8.1 BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. All participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

*"Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan" [Section 201.6a (4)].*

For the Warren County HMP update, The County formed a Planning Partnership to leverage resources and to meet requirements for the federal Disaster Mitigation Action of 2000 (DMA) its communities. The DMA provides the following definition for a local government:

*Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under state law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.*

Each participating planning partner has prepared a jurisdictional annex to this plan. These annexes, as well as information on the process of creating them, are contained in this Volume 2 of this HMP.

#### 8.1.1 Initial Solicitation and Letters of Intent

Warren County Department of Emergency Services solicited the participation of the incorporated city and all of the towns and villages within the County at the outset of this project. Jurisdictions that expressed interest signed a "Letter of Intent" and/or an authorizing resolution committing their participation and resources to the development of the Westchester County HMP Update.

Table 8-1 lists those jurisdictions that elected to participate in the 2023 Warren County HMP Update process, and have met the minimum requirements of participation as established by the County and Steering Committee:



**Table 8-1. Participating Jurisdictions in Warren County**

Participating Jurisdictions		
Warren County	Horicon (T)	Queensbury (T)
Bolton (T)	Johnsburg (T)	Stony Creek (T)
Chester (T)	Lake George (T)	Thurman (T)
Glens Falls (C)	Lake George (V)	Warrensburg (T)
Hague (T)	Lake Luzerne (T)	

## 8.2 PLANNING PARTNER RESPONSIBILITIES

The Planning Committee agreed to the following list of expectations:

- Review 2015 HMP goals and re-establish HMP update goals and objectives.
- Establish a timeline for completion of the HMP update.
- Ensure the HMP update meets the requirements of the DMA 2000 and FEMA and NYS DHSES guidance.
- Solicit and encourage the participation of regional agencies, a range of stakeholders, and citizens in the HMP development process.
- Assist in gathering information for inclusion in the HMP, including the use of previously developed reports and data.
- Organize and oversee the public involvement process and support outreach efforts in the community.
- Develop, revise, adopt, and maintain Volume I of the HMP update in its entirety and the local jurisdictional annex in Volume II.

As described in Section 7 (Plan Maintenance), the planning partnership is intended to remain active beyond the regulatory update to support plan maintenance. It is anticipated that the composition of the Steering and Planning Committees will change over time, and it will be the responsibility of each jurisdiction and its representatives to inform the HMP Coordinator of any changes in representation.

### 8.2.1 Jurisdictional Annex Preparation Process

As stated in the 2022 New York State Hazard Mitigation Planning Standards, jurisdictional annexes provide a unique, stand-alone guide to mitigation planning for each jurisdiction. The Warren County HMP Update includes an annex for Warren County and for every jurisdiction within the County's borders. Section 9 (Jurisdictional Annexes) includes an annex for every jurisdiction in Warren County.



## Annex Development

In order to facilitate update of the County and Jurisdictional Annexes, data from the 2017 Warren County HMP annexes was transferred to a new, updated new annex format, developed to meet federal and state criteria. Clear instructions provided to the County and municipality. These instructions provided a basis to address the following:

- Document changes in capabilities and vulnerabilities
- Provide a current status of the 2017 HMP mitigation strategy
- Develop a new mitigation strategy to address identified issues and to increase community resiliency

The County invited all municipalities to participate in a municipal kick-off meeting held on November 2, 2022, to provide an overview of the planning process. Subsequently, the contract consultant distributed a suite of municipal-specific worksheets to each planning partner populated with carryover information from the 2017 plan and designed to provide intuitive guidance to updating key information required to develop the 2023 plan update. This was intended to assist each municipality in updating, integrating, and completing annex input. During this first round of data gathering, the consultant provided guidance upon request to municipal representatives regarding input of growth and development trends; planning, legal, fiscal, and regulatory capabilities; education and outreach capabilities; NFIP information and capabilities; areas of integration; and updating the 2017 mitigation strategy.

On February 15, 2023, the County convened a planning partnership meeting to review the relative risk assessment methodology and County-wide results to inform the municipal points of contact of the information to be reviewed, updated, or confirmed by each planning partner. The consultant distributed individualized risk ranking worksheets to facilitate the municipal review and adjusting of the initial results as needed. The consultant supported municipalities by interpreting results if needed and to provide context of how this supports the development of strong mitigation actions to reduce the impacts of the hazards of concern.

A mitigation workshop was held on March 15, 2023 to provide an overview of developing a strong mitigation strategy. Finally, the last round of support meetings held in March through April 2023 addressed the development of the updated mitigation strategy, the confirmation of sheltering, housing and evacuation route information, and confirmation of the risk ranking and other gaps in information in the draft municipal annexes.

### Hazard Ranking Exercise

The risk assessment and risk ranking for each jurisdiction was presented in the February 2023 risk ranking meeting wherein there was a discussion of the overall risk assessment for the hazards of concern on the County and jurisdiction level. At this meeting, each planning partner was asked to review the ranked risk specific for its jurisdiction. Refer to Section 5.3 (Hazard Ranking) for the



methodology of the hazard ranking process. The calculated ranking was presented to each jurisdiction, and they were asked to review the ranking and revised based on history of events, probability of occurrence, and the potential impact on people, property, and the economy. The objectives of this exercise were to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as *high* for each jurisdiction as a result of this exercise were considered to be priorities for identifying appropriate mitigation actions, although jurisdictions also identified actions to mitigate *medium* or *low* ranked hazards, as appropriate.

### Mitigation Strategy Workshop

NYS DHSES attended and presented at a mitigation strategy workshop to Warren County and its jurisdictions during the March 15, 2023. This meeting, the consultant as well as FEMA and NYS DHSES discussed the importance of developing strong mitigation actions as well as state requirements for the plan. The purpose of this workshop was to guide the planning partnership in completing this portion of the planning process and how projects that are well developed and documented are more quickly identifiable for selection when grants become available. Information regarding consultant support prior to and subsequent to the meeting is provided in the Annex Development section, above.

### Municipal Support Meetings

In addition to the municipal kick-off meeting, municipal support meetings were held throughout October and November 2021. During scheduled meetings, municipalities, the consultant worked one-on-one with the planning partners to complete their jurisdictional annex. Each section of the annex was discussed to ensure accuracy and completeness. This included, but not limited to, the following:

- Reviewing the calculated hazard ranking for the jurisdiction and provide input to adjust the ranking as necessary.
- Inspecting the list of critical facilities located in the jurisdiction and its exposure to the 1 percent and 0.2 percent flood hazard area. As required in the 2017 New York State Hazard Mitigation Planning Standards, critical facilities located in the Special Flood Hazard Area must document that critical facilities are protected to the 500-year flood event, or worst damage scenario. For those that do not meet this level of protection, the plan must include an action to meet this criterion or explain why it is not feasible to do so. By reviewing the list, the jurisdictions could identify additional mitigation actions related to the critical facilities found in the municipality.
- Identifying mitigation initiatives that have reasonable potential to be accomplished within the lifespan of the County HMP (five years), including both FEMA-eligible projects and those projects using funds from non-FEMA sources.



## Jurisdictional Annexes

While the jurisdictional annex format is designed to document and assure local compliance with the DMA 2000 regulations, its greater purpose and function includes:

- Providing a locally-relevant synthesis of the overall mitigation plan that can be readily presented, distributed, and maintained.
- Facilitating local understanding of the community's risk to natural hazards.
- Facilitating local understanding of the community's capabilities to manage natural hazard risk, including opportunities to improve those capabilities.
- Facilitating local understanding of the efforts the community has taken, and plans to take, to reduce their natural hazard risk.
- Facilitating the implementation of mitigation strategies, including the development of grant applications.
- Providing a framework by which the community can continue to capture relevant data and information for future HMP updates.

Each jurisdiction's annex is intended to be a *living document* and will continue to be improved as resources permit. As such, its design is intended to promote and accommodate continued efforts to maintain the annex to be current and to improve the effectiveness of the annex as the key tool, reference, and guiding document by which the jurisdiction will implement hazard mitigation locally.

The following provides a description of the various elements of the jurisdictional annex.

**Section 9.X.1: Hazard Mitigation Plan Planning Team:** Identifies the hazard mitigation planning primary and alternate(s) contacts, the floodplain administrator, and additional contributors identified by the jurisdiction or who participated in the plan update. Further detail is provided in Section 3 (Planning Process) and Appendix B (Participation Matrix).

**Section 9.X.2: Municipal Profile:** Provides an overview and profile of the jurisdiction, including an identification of areas of known and anticipated future development and the vulnerability of those areas to the hazards of concern.

**Section 9.X.3: Capability Assessment and Integration:** Provides an inventory and evaluation of the jurisdiction's tools, mechanisms, and resources available to support hazard mitigation and natural hazard risk reduction. Within the municipal annexes, tables provide an inventory of the municipality's planning, regulatory, administrative, technical, and fiscal capabilities. Further, another table identifies the municipality's level of participation in state and federal programs designed to promote and incentivize local risk reduction efforts. *Integration of Hazard Mitigation into Existing and Future Planning Mechanisms* is provided within the capability assessment table to indicate how each planning mechanism can reduce risk. This annotated table indicates how the jurisdiction integrated hazard risk management into their existing planning, regulatory, and administrative framework (*integration capabilities*) and how they intend to promote this integration (*integration actions*).



Further information regarding federal, state, and local capabilities can be found in the Capability Assessment portion of Section 6 (Mitigation Strategy).

**Section 9.X.4: National Flood Insurance Program (NFIP) Compliance:** This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

- **National Flood Insurance Program (NFIP):** Documents the NFIP as implemented within the jurisdiction. This summary was based on surveys prepared by or interviews conducted with the NFIP Floodplain Administrators for each NFIP-participating community in the county. This subsection identifies actions to enhance implementation and enforcement of the NFIP within the community.
- **National Flood Insurance Program (NFIP) Summary:** Provides NFIP summary statistics for the jurisdiction.

**Section 9.X.5: Growth and Development Trends:** A breakdown of building permits given, within or outside of the regulatory floodplain and an identification of areas of known and anticipated future development and infrastructure and the vulnerability of those areas to the hazards of concern.

**Section 9.X.6: Jurisdictional Risk Assessment:** Provides information regarding each plan participant's vulnerability to the identified hazards. Full data and information on the hazards of concern, the methodology used to develop the vulnerability assessments, and the results of those assessments that serve as the basis of these local risk rankings may be found in Volume 1, Section 5 (Risk Assessment).

- **Hazard Area Extent and Location Map:** Includes a series of maps illustrating identified hazard zones, and critical facilities. Further, these maps show areas of known or anticipated future development, as available and provided by the jurisdiction.
- **Natural Hazard Event History Specific to the Municipality:** Identifies hazard events that caused significant impacts within the jurisdiction, including a summary characterization of those impacts as identified by the jurisdiction. The documentation of events and losses is critical to supporting the identification and justification of appropriate mitigation actions, including providing critical data for benefit-cost analysis. This inventory of events and losses is a work-in-progress and will continue to be improved as resources permit. As such, the lack of data or information for a specific event does not necessarily mean that the jurisdiction did not suffer significant losses during that event.
- **Hazard Risk Ranking:** Identifies and characterizes the broad range of hazards that pose risk to the entire planning area; however, each jurisdiction has differing degrees of risk exposure and vulnerability aside from the whole. The local risk ranking serves to identify each jurisdiction's degree of risk to each hazard as it pertains locally, supporting the appropriate selection and prioritization of initiatives that will reduce the highest levels of risk for each community.





- **Critical Facilities Flood Risk:** Identifies potential flood losses to critical facilities in the jurisdiction based on the flood vulnerability assessment process presented in Section 5 (Risk Assessment).
- **Identified Issues:** Presents other specific hazard vulnerabilities as identified by the jurisdiction.

**Section 9.X.7: Mitigation Strategy and Prioritization:** Discusses and provides the status of past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

- **Past Mitigation Initiative Status:** Where applicable, reviews progress of the jurisdiction's prior mitigation strategy, identifying the disposition of each prior action, project, or initiative in the jurisdiction's updated mitigation strategy. Other completed or on-going mitigation activities that were not specifically part of a prior local mitigation strategy would be included in this subsection.
- **Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy:** Other completed or ongoing mitigation activities that were not specifically part of a prior local mitigation strategy may be included in this subsection as well.
- **Proposed Hazard Mitigation Initiatives for the Plan Update:** Table 9.X-11 presents the jurisdiction's updated mitigation strategy. As indicated, applicable mitigation actions, projects, and initiatives are further documented on an Action Worksheet, which provides details on the project identification, evaluation, prioritization, and implementation process. Table 9.X-12 provides a summary of the local mitigation strategy prioritization process discussed in Section 6 (Mitigation Strategy).
- **Proposed Mitigation Action Types:** A matrix of the proposed mitigation actions by hazard and FEMA and CRS Category.
- **Prioritization of Actions:** A matrix identifying 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives prioritize actions as 'High', 'Medium', or 'Low.'

**Section 9.X.8: Action Worksheets:** Provides each municipality with a more developed starting point for project implementation should funding become available. While mitigation action worksheets are not a state or federal requirement, the County and communities elected to include this more detailed mitigation strategy information better position for funding and implementation of mitigation projects.

## 8.2.2 Coverage Under the Plan

The County as well as all 13 communities within the County fully met the participation requirements specified by the Steering Committee. Planning partners not having met principal requirements including completion of the jurisdictional data collection worksheets, completion of the jurisdictional annex, or participation in workshops or individual support meetings.



Table 8-2 lists the status of each jurisdiction, whether or not they submitted letters of intent to participate, and their ultimate status in this plan update. Appendix B (Participation Matrix) and Appendix C (Meeting Documentation) provide details on participation and meeting attendance.

**Table 8-2. Jurisdictional Status**

Municipality	Letter of Intent to Participate	Attended Workshops and/or Meetings?	Provided Update on Past Projects	Submitted Mitigation Actions for Current Plan	Seeking Approval for Adoption (meets requirements)
Bolton (T)	X	X	X	X	X
Chester (T)	X	X	X	X	X
Glens Falls (C)	X	X	X	X	X
Hague (T)	X	X	X	X	X
Horicon (T)	X	X	X	X	X
Johnsburg (T)	X	X	X	X	X
Lake George (T)	X	X	X	X	X
Lake George (V)	X	X	X	X	X
Lake Luzerne (T)	X	X	X	X	X
Queensbury (T)	X	X	X	X	X
Stony Creek (T)	X	X	X	X	X
Thurman (T)	X	X	X	X	X
Warrensburg (T)	X	X	X	X	X

Warren County and its communities recognize that the 2023 Warren County Hazard Mitigation Plan is a valuable resource in increasing resilience to the impacts of future hazard events. As this plan is maintained over the 5-year performance period, it is anticipated that the information and data contained in this plan will be leveraged to implement priority mitigation and resilience projects.



## SECTION 9. JURISDICTIONAL ANNEXES

### 9.1 WARREN COUNTY

This section presents the jurisdictional annex for Warren County that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the County, who in the County participated in the planning process, an assessment of Warren County's risk and vulnerability, the different capabilities used in the County, and an action plan that will be implemented to achieve a more resilient community.

#### 9.1.1 Hazard Mitigation Planning Team

The County identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many County departments, including Planning, Public Affairs, Office of the County Administrator, Fire Prevention & Building Code Enforcement. Warren County Department of Emergency Services and the Warren County Soil and Water Conservation District provided project leadership and represented the county on the Warren County Hazard Mitigation Plan Planning Partnership and Steering Committee and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the County's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.1-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Jim Lieberum, CPESC – District Manager, Hazard Mitigation Coordinator Address: 394 Schroon River Rd, Warrensburg, NY 12885 Phone Number: 518-623-3119 Email: jiml@warrenswcd.org	Name/Title: Ann Marie Mason – Director of Emergency Services Address: 1340 State Route 9, Lake George, NY 12845 Phone Number: 518-824-6652 Email: masona@warrencountyny.gov
<b>Additional Contributors</b>	
Name/Title: Ann Marie Mason – Director of Emergency Services Method of Participation: Provided information on previous events, capabilities	
Name/Title: Jim Lieberum – Warren County SWCD for SWCD and DPW	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on previous actions	
Name/Title: Ethan Gaddy –Assistant County Planner	
Method of Participation: Provided information on previous actions	

## 9.1.2 County Profile

Warren County is located in the northeastern part of New York State. It is bounded on the east by Lake George and Washington County, to the west by Hamilton and Saratoga Counties, to the north by Essex and Hamilton Counties, and to the south by Saratoga County.

Warren County was formed in 1813 from Washington County. The County is included in the Glen Falls Metropolitan Statistical Area. Warren County consists of 13 municipalities, covering 932 square miles. The County is one of the 62 counties in New York State and is comprised of one city, 11 towns, and one incorporated village.

The County contains 11 town governments, 1 city government, 1 village government, and the County government. State and federal government statutes and regulations control how the local governments operate. Local governments include the City of Glen Falls; the Towns of Bolton, Chester, Hague, Horicon, Johnsburg, Lake George, Lake Luzerne, Queensbury, Stony Creek, Thurman, and Warrensburg; and the Village of Lake George. The County and each municipality operate under the limits prescribed by various rules and laws of New York State. Each government entity has various responsibilities, funding sources, staffing levels, elected positions, and administrative capacities.

According to the U.S. Census, the 2020 population for Warren County was 65,737, a 0.1 percent increase from the 2010 Census. Data from the 2020 U.S. Census indicate that 4.3 percent of the population is 5 years of age or younger and 22.4 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

For more information on Warren County, refer to Section 4 (County Profile).

## 9.1.3 Jurisdictional Capability Assessment and Integration

Warren County performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.



- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for Warren County to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to Warren County. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.1-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Fire Prevention and Building Code	State and Local	Planning and Development
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The County adopted the New York State Uniform Fire Prevention and Building Code.				
<b>Zoning/Land Use Code</b>	Yes	Zoning Ordinance	Local	Planning and Development
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Warren County Department of Planning and Community Development and Warren County (WC) Planning Board provides technical services to local planning and zoning boards for matters related to community master plans, zoning ordinances and related land use regulations.				
<b>Subdivision Ordinance</b>	Yes	Subdivision Ordinance	Local	Warren County Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Warren County Department of Planning and Community Development and Warren County (WC) Planning Board provides technical services to local planning and zoning boards for matters related to community master plans, zoning ordinances and related land use regulations.				
<b>Site Plan Ordinance</b>	Yes	Site Plan Ordinance	Local and County	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Warren County Department of Planning and Community Development and Warren County (WC) Planning Board provides technical services to local planning and zoning boards for matters related to community master plans, zoning ordinances and related land use regulations.				
<b>Stormwater Management Ordinance</b>	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	-	-	-
<b>Flood Damage Prevention Ordinance</b>	No	-	-	-
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	No	-	-	-
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	No	-	-	-
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	Yes	Upper Hudson River Watershed Revitalization Plan, 2020	Regional	NY Department of State
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Hudson River is one of the most culturally, economically, and ecologically important waterbodies in New York State. Overtime, human activity – including industrialization, urbanization, and modification have placed significant pressure				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
on the natural resources of the region. This plan takes stock of that pressure and identifies goals and projects that will improve the water quality within the Upper Hudson River Watershed.				
<b>Stormwater Management Plan</b>	No	-	-	-
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan, 2022	Local, County	Office of Emergency Services
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Emergency Management Plan establishes the basic requirements for managing emergencies in Warren County. The objective of the plan is to identify, assess and prioritize local and regional vulnerabilities to emergencies or disasters and the resources available to prevent or mitigate, respond to, and recover from them, outline short, medium and long range measures to improve the County's capability to manage hazards, show that County and local governments will take appropriate actions to prevent or mitigate effects of hazards and be prepared to respond to and recover from them when an emergency or disaster occurs, provide for the efficient utilization of all				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
available resources during an emergency, provide for the utilization and coordination of local government, state and federal programs to assist disaster victims, and to prioritize the response to the needs of the elderly, disabled, low income, and other groups which may be inordinately affected, and provide for the utilization and coordination of state and federal programs for recovery from a disaster with attention to the development of mitigative programs.				
The Plan includes annexes for hazardous material response, hazardous weather, and mass care.				
<b>Continuity of Operations Plan</b>	Yes	Warren County Continuity of Operations Plan (COOP)	Local, County	Office of Emergency Services
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Continuity of Operations (COOP) Plan presents the threats, hazards, and vulnerabilities that an agency is subject to during daily operations. A COOP Plan also establishes what the mission essential functions (MEF) are for the County as well as for each department or agency. MEFs are the limited set of government functions that must be continued throughout or resumed rapidly after a disruption of normal activities. Critical tasks are those actions that are necessary to maintain or restore Warren County's MEFs.  The ability for Warren County to maintain its critical services to County residents during emergencies is vital. To that end, effective planning is the key to ensuring a timely response and sustainment of critical services. In order to achieve that goal, Warren County identified MEFs and resources to ensure that those functions can be continued throughout or resumed rapidly after a disruption of normal activities. The Warren County COOP Plan ensures county-level MEFs that are crucial for providing basic services necessary to the health and safety of the people within Warren County are supported.				
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<b>Public Health Plan</b>	No	-	-	-
<b>Other</b>	Yes	Warren County Excessive Heat Plan 2022	County	Warren County Emergency Services
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Annex is to guide County agencies and Operational Area jurisdictions during an Excessive Heat Event. This Annex identifies resources, actions and critical issues regarding a weather event, including monitoring, public information, and congregate care and/or shelter. This Annex should be used in conjunction with the Warren County Comprehensive Emergency Management Plan (CEMP) and follow the Emergency Operations Center (EOC) guidelines whenever needed.  This Annex is intended to provide a written plan to assist Warren County agencies with managing information and responding to an Excessive Heat Event. As with all emergency plans, these guidelines will provide relevant agencies and decision makers with flexible tools, options and considerations as the situation dictates and evolves.				



Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
This Annex recognizes that in the event of such an emergency, this plan would draw upon the collaborative efforts and relationships of various agencies in order to provide appropriate resources, manpower and response to such an event. The end goal is to ensure a coordinated response occurs during an Excessive Heat Event, with public information being a primary focus. The Warren County Office of Emergency Services will support Operational Areas of jurisdiction through interagency support, as needed.			

## Development and Permitting Capability

The table below summarizes the capabilities of Warren County to oversee and track development.

**Table 9.1-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	No	Development permits are issued at the local level
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	-
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	N/A	-
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	-

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Warren County and their current responsibilities that contribute to hazard mitigation.

**Table 9.1-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	No	- These responsibilities fall to the staff in the planning department.
Zoning Board of Adjustment	No	-
Planning Department	Yes	The Warren County Planning Department is responsible for analyzing, prioritizing and planning for the balanced and sustainable use of the county's natural resources and built environment to enhance the quality of life for current and future generations while respecting the character of the county



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The mission of the County-sponsored local development corporation is to further projects and programs that enhance the economic well-being of Warren County and its communities. In addition to serving as a fiduciary account for County Planning Department projects and repository for housing program funding awards, disbursements and repayments, the LDC administers the county's small business lending program.
Public Works/Highway Department	Yes	The Department of Public Works is responsible for overseeing all County highway and bridge construction, maintenance of all road machinery and snow removal, as well as managing the following divisions: Floyd Bennett Memorial Airport, Maintenance Shop, Buildings and Grounds, Civil Defense & Natural Disaster, Parks & Recreation, Engineering, Sewer Administration, and Highway & Traffic.
Construction/Building/Code Enforcement Department	Yes	<p>The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code in Warren County (except in the Town of Queensbury and City of Glens Falls).</p> <p>Duties and responsibilities include:</p> <ul style="list-style-type: none"> <li>• Issuance of Building Permits (including manufactured homes)</li> <li>• Issuance of Solid Fuel Burning Device Permits (woodstoves, fireplaces and pellet stoves)</li> <li>• Issuance of Demolition Permits</li> <li>• Conducting Plan Reviews for Code Compliance</li> <li>• Conducting construction inspections</li> <li>• Issuing Certificates of Occupancy, Completion, Compliance and Operating Permits</li> <li>• Conducting Fire Safety Inspections</li> <li>• Inspection of structures following fire or explosion</li> <li>• Responding to fire safety and life safety complaints</li> </ul>
Emergency Management/Public Safety Department	Yes	Warren County Office of Emergency Services is responsible for the safety of the residents and visitors through the provision of training for volunteers, development of emergency plans that incorporate mitigation, preparedness, response and recovery for all types of major disasters that occur within Warren County.
Warning Systems / Services	Yes	IPAWS; NY-Alerts





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
(mass notification system, outdoor warning signals, etc.)		
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	yes	The DPW department has a maintenance program to reduce risk. It involves brushing and tree maintenance, ditching, clearing culvert pipes of debris and replacement and if needed upsizing damaged or deteriorated culvert pipes. Based on the program, a certain number of miles of roadway are checked, determine what work is needed and then perform the work. The average is about 20-30 miles in each shop per year.
Mutual aid agreements	Yes	There are mutual aid agreements covering Fire & EMS service within the county.
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	Hazard Mitigation Coordinator
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Warren County Planning Board; Warren County Department of Planning and Community Development; WC SWCD
Engineers or professionals trained in building or infrastructure construction practices	Yes	WC Fire Prevention and Building Codes; WC Department of Public Works; WC SWCD
Planners or engineers with an understanding of natural hazards	Yes	WC Department of Planning and Community Development and WC Planning Board; WC SWCD
Staff with expertise or training in benefit/cost analysis	Yes	Warren County Soil and Water Conservation District
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Warren GIS
Environmental scientist familiar with natural hazards	Yes	Warren County Soil and Water Conservation District
Surveyor(s)	No	-
Emergency Manager	Yes	Warren County Office of Emergency Services
Grant writer(s)	Yes	Warren County Soil and Water Conservation District
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

The table below summarizes financial resources available to Warren County.

**Table 9.1-5. Fiscal Capabilities**

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

### Education and Outreach Capability

The table below summarizes the education and outreach resources available to Warren County.

**Table 9.1-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	Public Information Officer
Personnel skilled or trained in website development	Yes	IT Department and Public Information Officer
Hazard mitigation information available on your website	Yes	There is a link to the Warren County Soil & Water Conservation District Website on the Warren County Website. They are the Hazard Mitigation Coordinator for Warren County.
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	NY-Alert, Ready Warren County NY App
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"><li>If yes, please describe.</li></ul>	Yes	Ready Warren County NY App – offers emergency preparedness information and tools to residents of the county.



## Community Classifications

The table below summarizes classifications for community programs available to Warren County.

**Table 9.1-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–
Public Protection (ISO Fire Protection Classes 1 to 10)	No	–	–
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Bronze	May 28, 2020
Storm Ready Certification	Yes	Warren County is Storm Ready	September 19, 2022
Firewise Communities classification	No	–	–
Other	No	–	–

Note:

N/A Not applicable

– Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.1-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Strong
Infestation and Invasive Species	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate



### 9.1.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

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

The following table summarizes the NFIP statistics for Warren County.

**Table 9.1-9. NFIP Summary**

Jurisdiction	# Policies	# Claims (Losses)*	Total Loss Payments*	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties	# Policies in the 1% Flood Boundary
Warren County	111	114	\$1.8 Million	1	1	1	Unavailable

Source: FEMA, 3/2023

Notes: \*Claims data extracted from HUDEX on 1/26/2023

RL: Repetitive Loss

SRL: Severe Repetitive Loss

RL FMA Definition: Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition: Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

#### Flood Vulnerability Summary

NFIP administration and floodplain management is performed on the local community level as the NFIP Floodplain Administrator is identified in the flood damage prevention ordinance for each participating community. However, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code for communities in the county with the exception of the Town of Queensbury and City of Glens Falls. Upon receipt of a signed zoning compliance certificate, as applicable, the county performs the code review. For the Town of Thurman, FIRM review is performed in the absence of zoning regulations.

The County supports communities by providing education and coordination in the following areas:

- The County HMP Coordinator provides periodic outreach to communities to provide technical information and guidance to support effective floodplain management and to advise the availability of mitigation funding opportunities.
- The County Department of Public Works and the County Soil & Water Conservation District actively identifies and mitigates flood and erosion problem areas in the County.
- The County coordinates with NYSDEC to provide information to communities regarding participation in the NFIP.



### 9.1.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.1-10 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.1-10. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	92	0	61	0	77	0	83	0	110	0	109	0
Multi-Family	7	0	5	0	4	0	2	0	0	0	42	0
Other (commercial, mixed-use, etc.)	12	0	15	0	26	0	15	0	16	0	14	0
Total New Construction Permits Issued	111	0	81	0	107	0	100	0	126	0	165	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
Refer to municipal annexes.												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
Refer to municipal annexes.												

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.1.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for Warren County's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps are provided in the hazard profiles (Section 5.4) to illustrate the probable areas impacted within Warren County based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. The source of the regulatory





floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.

## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

Table 9.1-11 provides details regarding municipal-specific loss and damages the County experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.1-11. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
July 1, 2017	Thunderstorm/Wind	Yes	<p>An upper-level disturbance interacted with a very moist atmosphere on July 1, generating several rounds of thunderstorms across areas mainly along and north of I-90. These storms resulted in torrential rainfall and flash flooding in portions of Herkimer, Fulton, Warren, Washington, and Rensselaer Counties. It was the second straight day of heavy rainfall for some of these areas. The village of Hoosick Falls was hit particularly hard by flash flooding, with many residences experiencing basement and first-floor flooding and several roads washed out as Woods Brook overwhelmed its flood protection system and coursed through the town. A state of emergency was declared for the village, where an estimated \$300,000 in damage occurred. Across Rensselaer County, flooding resulted in an estimated \$3.6 million in damage. Rainfall amounts up to 4 were recorded in Washington County where several roads were washed out. Neighboring</p>	<p>Clendon Brook Road in Queensbury and Bear Town Road in Lake Luzerne were washed out due to heavy rains.</p>



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			Warren County estimated \$1 million in flood damage. In Herkimer County, a mudslide closed a state highway, and people had to be evacuated from locations in the villages of Herkimer and Frankfort due to rising water. Several area rivers reached minor and moderate flood stage, including the Mettawee River at Granville which crested just below major flood stage. Finally, a few of the storms resulted in isolated wind damage.	
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	A large swath of rainfall totaling 2–5 inches, with isolated areas as high as 7 inches, occurred over the Mohawk Valley and southern Adirondacks, resulting in reports of flash flooding. The runoff caused rapid rises on area creeks and streams, with river gauges reaching record levels along the Mohawk River at Little Falls, the West Canada Creek at Hinckley and Kast Bridge, and the Sacandaga River at Hope.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19	The County was subject to closures and masking/social distancing requirements.
March 20, 2022	Beaver Dam Failure	N/A	Beaver Dam on Hidden Lake failed flooding	Properties were flooded along Olmstedville Road. A section of Olmstedville Road was washed out.
April 18–19, 2022	Late winter storm	N/A	8–11 inches of snow.	Due to weight of snow many trees, branches and power lines fell. 16 thousand county residents without power.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
				Roads blocked making it difficult to plow the snow.

Notes:

EM: Emergency Declaration (FEMA)

FEMA: Federal Emergency Management Agency

DR: Major Disaster Declaration (FEMA)

N/A: Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes Warren County's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for Warren County. Warren County reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

**Table 9.1-12. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Medium	Low	High	High	High	Medium
		Dam Failure	Disease Outbreak			
		High	Low			

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the County



## Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.1-13. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Fairgrounds	County Building	X	X	-	Extension building not in the floodplain. Cornell Cooperative Extension will not store equipment in the floodplain.

Source: Warren County 2022

## Identified Issues

After review of Warren County's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, Warren County identified the following vulnerabilities within their community:

- The Middleton Bridge is located in the Towns of Bolton and Warrensburg and crosses the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed.
- Critical facilities require backup power to maintain continuity of operations. The following critical facilities require backup power:
  - Toney Pit facility
  - North End DPW Facility
  - South End DPW Facility
  - Snow Removal Equipment building at Floyd Bennet Memorial Airport
- Washouts have impacted both sides of County Route 11.



- 13th Lake Road (County Route 78) in the Town of Johnsbury has unstable slopes. The frost freeze cycle is problematic on the steep bare side slope. Rock/boulders have impacted the road and created hazardous driving conditions. Work has been done to reduce failures including new gabion baskets and grading of sections of the slope but additional efforts are needed. There is a private property issue – land rights, acquisition issues here.
- Integration of hazard mitigation in County plans is limited.
- The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson–Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson–Hoosic Watershed and are seeking public and stakeholder comment.
- NFIP floodplain administration in the County’s municipalities is often limited, requiring County support.
- Currently, only seven communities in Warren County participate in the Climate Smart Communities program with five communities and Warren County being certified (bronze certification). Additional participation in the program would allow for greater climate change preparation and county sustainability.
- The County lacks disaster debris management planning to provide adequate procedures to address post-disaster cleanup.
- Warren County lacks a plan for supporting residents that require housing/relocation following a severe hazard event that results in destruction of their homes.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- There are many areas affected by localized stormwater flooding that are not identified on FEMA FIRMs. FIRMs have been noted as being outdated or inaccurate in many municipalities.
- There are a number of undersized culverts in the County which contribute to localized flooding.
- Vulnerable populations may need immediate access to heating or cooling centers during periods of extreme temperatures and need current information regarding location of heating and cooling centers.
- Communities do not have a clear understanding of the potential impacts of flooding on stream processes and related post-flood implications.
- Loon Lake Dam is a high hazard dam under the jurisdiction of the Town of Chester. Failure of the dam would also impact State Highway Route 8/9. Rehabilitation of the dam is needed to protect from dam failure. An engineering study of the dam has been completed.

### 9.1.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.



### **Past Mitigation Initiative Status**

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The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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Table 9.1-14. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost		
WC-1	Remove the Middleton Bridge over the Schroon River in the Towns of Bolton and Warrensburg. (Revised from 2011 strategy)	Flood, Severe Storm	Failing bridge. Closed.	WCDPW, A/GFTC, Towns of Bolton and Warrensburg	In Progress	Level of Protection		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Damages Avoided; Evidence of Success		
WC-2	Backup Power for Critical DPW Facilities: Install or upgrade backup power systems at the County DPW facilities including the Toney Pit Facility and DPW facilities at Warrensburg, North End and South End.	All Hazards		WCDPW	In Progress; Portable generator at the Toney Pit. Main DPW office/sign shop and mechanic shop (Warrensburg) have backup power.	Cost		1. Include in 2023 HMP 2. Toney Pit facility needs fixed site permanent generator. North End and South End still need generators. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-3	Backup Power for County Airport: Replace/upgrade backup power systems at the county-owned Floyd Bennett Memorial Airport (GFL) in Queensbury, considered a county critical facilities. 2 generators, one portable. Will handle runway lights, building and gas pumps, but only when portable generator is started. Multiple generators here	All Hazards		County DPW – Airport Administration Division	In Progress	Cost		1. Include in 2023 HMP 2. The County has a newer portable generator that provides back up power for all facilities except the newly constructed Snow Removal Equipment (SRE) Building. The alternate generator although very old is used as a backup to the portable backup. Next steps would be to evaluate/acquire a generator for the SRE building and to monitor the old stationary generator for potential replacement. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
								1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	are very old, and may not be located optimally. Evaluate the need for replacement/upgrades, including consideration of relocation.							
WC-4	Human Services Building Backup Power Improvements: Install a new transfer switch to all systems in building. Generator will handle entire building at this time though it is not set up to do so.	All Hazards	Low power support in an event.	WCDPW – Facilities Committee	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-5	County Fuel Supply Resiliency: Assure that the County has adequate fueling facilities, resistant to power outages and properly distributed, so that emergency vehicles and equipment are able to respond to, and support recovery from, hazard events and disasters in the County and	All Hazards	Power back up for following fueling stations: Muni center, Wsbg @ Main Office, Hague, Bolton, North Creek, Horicon, WC Airport.  *****No backup at fueling station in Lake Luzerne	WCDPW	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
						Cost		
WC-6	County DPW Projects: Bridges, Roads, Culvert upgrades/mitigation. Specific projects noted are: Back To Sodom Road Bridge (Johnsburg) Market Street Bridge (Horicon) Padanarum Road Bridge #2 (Bolton) Blair Road Bridge (Horicon) Bay Road (Queensbury) – Reconstruction Round Pond Road, Queensbury Avenue, and Boulevard Road (Queensbury) – Rehabilitation Continuing Maintenance of all bridges and culverts  Assure that any mitigation addresses the 500-year flood event or “worst damage scenario	Flood, Severe Storm, Severe Winter Storm; Earthquake; Landslide	Infrastructure upgrades necessary.	WCDPW, A/GFTA; working with local municipalities and NYSDOT	Complete. All work completed on specified items.	Level of Protection		1. Discontinue 2. 3. Complete
						Damages Avoided; Evidence of Success		
WC-7	County Route 11 Flood Mitigation Project: At this time, the Warren County Department of Public Works is seeking assistance to:	Flood, Severe Storm	Washouts have impacted both sides of County Route 11.	WCDPW	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project					Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
		Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)			1. Project to be included in 2023 HMP or Discontinue	2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	<p>Develop a hydrologic study and, (2) Develop a remediation plan.</p> <p>The hydrologic study will identify the existing and potential water inputs into the watershed and will detail out storm derived water volumes, detention volumes and, peak unit discharges. The remediation plan will be developed based off of the technical data that the hydrologic study has calculated. The remediation plan will incorporate traditional and alternative designs for stabilization, drainage and roadway construction at this location. Once completed, the study and plan will provide guidance to the County DPW with its decision making to mitigate for future losses of this roadway. Assure that any mitigation addresses the 500-year flood event or "worst damage scenario".</p>								



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
						Cost		
WC-8	Landslide – 13 <sup>th</sup> Lake Road (County Route 78) – Unstable slope – vulnerability is County Road. Continue to evaluate possible mitigation actions; implement once designed and funding is secured. Added Gabion baskets. There is a private property issue – land rights, acquisition issues here. No determinations as to what to do. Tough spot with not much room. In Johnsburg next to Hamilton County line	Landslide	Frost freeze cycle problematic on steep bare side slope. Rock/boulders impact road and create hazard. Work has been done to reduce failures including new gabion baskets and grading of sections of the slope.	WCDPW	In Progress	Level of Protection		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WC-9	Countywide Debris Management Plan: Develop plans for debris management after hazard events, including severe winter snow/ice events, and other severe storms. 5-Year County plan to be coordinated with DPW, all municipalities and NYSDEC. Include consideration of invasive species (e.g. Asian Longhorn Beetle, Emerald Ash Borer) on the generation of	Severe Storm, Severe Winter Storm, Infestation		WCOES, WCDPW; A/GFTC; all municipalities	In Progress	Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. 3.



## Section 9. Jurisdictional Annexes

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	vegetative debris, and the overall management of that debris. This plan shall consider the debris management challenges presented by the 500-year event							<ol style="list-style-type: none"> <li>Project to be included in 2023 HMP or Discontinue</li> <li>If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
WC-10	Develop County COOP/COG Plan: A County COOP/COG plan will have provisions in place for notification, what facilities/services must be continuous, which ones must be available when, alternate locations. Municipalities would need to develop their own COOP plans	Severe Storm; Severe Winter Storm; Infestation		WCOES, WCDPW; A/GFTC; all municipalities	Completed July 2017 and updated annually.	Cost		<ol style="list-style-type: none"> <li>Discontinue.</li> <li></li> <li>Complete.</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-11	County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures: Warren County Office of Emergency Services to develop and implement a program to work with all Warren County municipalities to identify sites within the community suitable for relocation of houses out of the floodplain, or building new houses	All Hazards		Warren County Office of Emergency Services	No progress	Cost		<ol style="list-style-type: none"> <li>Continue in HMP 2023</li> <li>WCOES will develop a Plan for Displaced Residents, once approved and appendix will be added to this plan</li> <li></li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		





Project #	Project					Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
		Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)			1. Project to be included in 2023 HMP or Discontinue	2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
	once properties in the floodplain are demolished. As part of this program, all communities will be surveyed to identify potential sites, including any pre-disaster actions that may be required to make them viable for these purposes. Further, this effort will include working with other County departments and regional and local stakeholders who own or manage potentially suitable sites (e.g. County parks) for the potential siting of temporary housing, and determining what improvements would need to be made to accommodate temporary housing (e.g. water, electric, sanitary services, bathing facilities), and that outside funding would likely be needed if such improvements were not already available.  It is noted that while a community may identify							3. If discontinue, explain why.	



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	suitable sites for relocation, the use (including transfer of ownership) of suitable private property would be at the discretion of the property owner.							<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
WC-12	Ensure the County website has all the current and updated NFIP flood data and mapping	Flood, Severe Storm		Warren County Department of Planning and Community Development (WCDPCD), WCOES	Complete	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. The information is shown on the Community Map on the Warren County GIS Website: <a href="https://www.warren-county.com/arcgis.com">Warren County Community Map (arcgis.com)</a></li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-13	Encourage local municipalities to review their codes (specifically municipal zoning and emergency codes), and provide support for such reviews and amendments at the request of local governments. This review should help to ensure that all jurisdictions have flood damage prevention codes that appropriately regulate activities in flood hazard areas. It is noted that the County does not have any Land Use Codes and cannot require local municipalities to adopt	All Hazards		WCDPCD	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	or modify their local codes. The County can and will encourage local municipalities to review their codes to determine if there are any mitigations measures that can be included in any amendments.							1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WC-14	Review and update County and municipal plans to integrate goals, objectives, and activities from this HMP which are not found in existing regulatory documents, as appropriate.	All Hazards		WCDPCD	No Progress	Cost		1. Include in 2023 HMP 2. 3.
WC-15	Continue to enhance and maintain the critical facility database developed during, and as a critical part of, this hazard mitigation plan update process. Continue to leverage this database to identify vulnerable critical facilities in support of mitigation action WC-18 and -19 below.	All Hazards		WCDPCD	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
WC-16	County Stormwater Management/MS4: Complete county-wide mapping for stormwater management and MS4 compliance. Continue	Flood, Severe Storm		Warren County Soil and Water Conservation District (WC SWCD)	Ongoing capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
						Cost		
						Level of Protection		
						Damages Avoided; Evidence of Success		
						Cost		
						Level of Protection		
						Damages Avoided;		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
						Evidence of Success		
	to support and implement stormwater improvement projects as funding is made available (typically through State). The County is an MS4 community within the Glens Falls and Lake George area. SWCD is the County S/W Management Officer and have done all the mapping within the MS4 area. They will have the countywide MS4 area mapped by end of 2016							<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
WC-17	Provide applicable support to municipalities as they maintain local compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further assist communities with meeting and/or	Flood		County (WCSWCD and WCOES), working with municipalities with support from NYS DEC, NYS DHSES, ISO, FEMA	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	exceeding the minimum NFIP standards and criteria through the following NFIP-related actions identified in subsequent initiatives, as follows: Local Support of Private-Property Mitigation Public Outreach Website Direct outreach and information program to RL/SRL and other flood-prone property owners Promote local participation in ongoing map update efforts Flood Damage Prevention Ordinance (FDPO) Updates, and Higher Regulatory Standards Building Local Floodplain Management Capabilities through training and seminars							<ol style="list-style-type: none"> <li>Project to be included in 2023 HMP or Discontinue</li> <li>If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
WC-18	Promote the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with Critical Facilities and NFIP Repetitive Loss (RL)	Flood		County (WCSWCD and WCOES), working with municipalities with support from NYS DEC, NYS DHSES, ISO, FEMA	Ongoing capability	Cost		<ol style="list-style-type: none"> <li>Discontinue</li> <li></li> <li>Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	and Severe Repetitive Loss (SRL) properties as a priority. The County shall provide local support as applicable and feasible, which may include direct outreach to flood-prone property owners, specifically those identified as Critical Facilities, as NFIP RL/SRL or otherwise identified as flood-prone, and working with interested and voluntary property owners to mitigate their properties based on available funding from FEMA and local match availability.							<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
WC-19	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what they can do in the way of mitigation, preparedness (including flood insurance), and response in the event of an emergency	All Hazards		WCSWCD; WCOES; other County Departments as applicable	In Progress: SWCD conducted one meeting at each county community plus presented at several other events in regards to HM awareness /impacts/potential resolutions	Cost		<ol style="list-style-type: none"> <li>1. Include in 2023</li> <li>2.</li> <li>3.</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-20	County and Local Mitigation Capability Building:	All Hazards		County, through WCSWCD and WCOES; as	Ongoing capability; SWCD has conducted 7	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		





Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
								<ol style="list-style-type: none"><li>1. Project to be included in 2023 HMP or Discontinue</li><li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li><li>3. If discontinue, explain why.</li></ol>	
	Arrange/facilitate and/or promote regional workshops, trainings and continuing education (prepared and offered by others) in the following areas: <ul style="list-style-type: none"><li>• Floodplain Management and the Certified Floodplain Managers (CFM) certification</li><li>• Community Rating System (CRS) – Limited to promoting workshops or training opportunities offered by others as available</li><li>• Stream Intervention Programs (ongoing with WCSWCD)</li><li>• Benefit-Cost Analysis (BCA)</li><li>• Substantial Damage</li></ul>		Need accurate NFIP data.	supported by NYS DHSES, FEMA and ISO	(?) emergency stream intervention trainings in the county and regionally since 2017.  DPW is well versed with BCA and is willing to assist with HM BCA.	Damages Avoided; Evidence of Success			



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	Estimating (SDE) • NFIP Elevation Certificates (EC)							1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WC-21	The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. As of November 2016, FEMA and NYS DEC are presenting work maps for the Hudson-Hoosic Watershed, and seeking public and stakeholder comment. To the extent applicable and feasible, the County shall use all available means of promoting broad local government and public involvement through announcing meetings and providing available supporting data as applicable.	Flood		County, through WCSWCD and WCOES; promoting FEMA and NYS DEC map update efforts	In Progress; FEMA and DEC process – have not heard anything about results	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-22	Provide support to municipalities as they work to update and enhance local floodplain management regulatory capabilities through the	Flood		County, through WCSWCD and WCOES; promoting FEMA and NYS DEC	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided;		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
	following In Progress activities: •Update and adopt the local Flood Damage Protection Ordinance (FDPO) to conform to latest regulations and guidance including the following: o Proper identification of “Administrator” o Proper reference to current regulatory mapping and any other “best available data” being used •Higher Regulatory Standards (per local interest): O Additional Freeboard o Cumulative Substantial Damages/Improvements					Evidence of Success			1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WC-23	The County shall review and incorporate the latest information on climate change projections while considering planning, engineering and undertaking mitigation actions and other projects throughout the County. Specifically, the County shall refer to the latest ClimAID “Responding to Climate	All Hazards		All County Departments and Agencies	Ongoing Capability	Cost			1. Discontinue 2. 3. Ongoing capability
						Level of Protection			
						Damages Avoided; Evidence of Success			



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	Change in New York State" reports (2011, and 2014 Supplement) developed by the New York State Energy Research and Development Authority (NYSERDA), as well as other state and nationally-recognized, peer-reviewed, science-based sources of climate projection data and information, as available							1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WC-24	Promote County and Municipal participation in the Climate Smart Communities program.	Flood		All County Departments and Agencies	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
WC-25	Floodprone Critical Facilities in Warren County – Identify Critical Facilities at which the structures or the parcel are located wholly or partially within the 100-year floodplain. The County will compile the names, types, locations of facilities and their relationships to the flood zone(s).	Flood		County OEM, NYS DHSES	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project						Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
		Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)				1.	2.
	Once the Critical Facilities are identified, identify appropriate level of protection for the facilities. Indicate whether there is no history of flooding and conditions exist where future damage is unlikely or if there is a history of flooding or future damage is likely based on existing conditions. For those facilities that have been damaged previously, identify any known protection measures already in place.  If protective measures are in place, evaluate potential long-term mitigation actions to eliminate the need for response  If no protective measures are in place, assemble a planning team to collaborate on mitigation alternatives to reduce or eliminate the vulnerability to flooding. The Critical Facilities that fall into this								1. Project to be included in 2023 HMP or Discontinue	2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.



Project #	Project					Evaluation of Success (if project status is <u>complete</u> )		Next Steps	
		Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)			1. Project to be included in 2023 HMP or Discontinue	2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
	category will be protected to a 500-year flood event.  Timeframe for this action is as follows: 6 months: convene a meeting of communities and stakeholders for critical facilities in the floodplain to assess response or mitigation measures; develop a prioritized list based on extent of past damages, the relative isolation of the facility, the number of residents dependent on it, etc. 12 months: meet and then conduct site visits with NYS DHSES mitigation staff using the prioritized list; 24 months: prepare complete on-site information for the stakeholders; who is responsible for coordinating the action; what is needed for each facility during a flooding event; who is contacted to obtain the needed supplies							3. If discontinue, explain why.	





Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	24 months: complete worksheets for all vulnerable critical infrastructure in Warren County							<ol style="list-style-type: none"><li>1. Project to be included in 2023 HMP or Discontinue</li><li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li><li>3. If discontinue, explain why.</li></ol>

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## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.1-14, Warren County identified the following mitigation efforts completed since the last HMP:

- In November of 2018, the Warren County Soil and Water Conservation District purchased sandbagger machinery and developed a Memorandum of Agreement to enable community use of the machine to reduce flood losses in areas not protected by mitigation projects or flood reduction infrastructure.
- The County has mitigated the beaver dam/flood impoundment issue on Route 11 and has Implemented a monitoring program to reduce potential flood impacts.
- County hosted RiskMAP meeting for the upper Hudson and Sacandaga River and Lake Champlain stakeholder.
- County is installing a solar array at the county airport. Potential solar location is the Toney Pit, south end or north end.
- The County and municipalities have implemented mitigation actions to protect critical facilities and infrastructure throughout the planning area. As an example, the Highway Department maintains a multi-year, rotating program of roadway and culvert (drainage) maintenance and improvements to help mitigate stormwater damage to county roads.
- The County Department of Public Works department has a maintenance program to reduce risk. It involves brushing and tree maintenance, ditching, clearing culvert pipes of debris and replacement and if needed upsizing damaged or deteriorated culvert pipes to a 1-percent change design capacity. Based on the program, a certain number of miles of roadway are checked, determine what work is needed and then perform the work. The average is about 20-30 miles in each shop per year. Areas mitigated include:
  - West Hague Road over Hague Brook (@ Fish and Game )
  - West Hague Road over Hague Brook (@ Macoy Rd.)
  - Moon Hill Road over unnamed stream (replaced round with squash prior to federal aid project)
  - 13th Lake Road (Twin Pipes @ Barton Mines)
  - CR 11 – Horicon Ave.(Bolton) over Finkle Brook
  - Call Street over Bennie Brook
  - Bay Road over Halfway Brook (was triple culverts but DOT considered it a bridge)
  - Bay Road over Glen Lake outlet
  - Warrensburg Road over Number 9 Brook (@ Cameron Road)
- The County awarded ARPA funding to the Warren County Soil & Water Conservation District to purchase and have installed data collection devices on Glen Lake and Lake Sunnyside, the two lakes listed in both the County and Town of Queensbury MS4 programs. Parameters monitored include air temperature, relative humidity, barometric pressure, rainfall, water level,



& water temperature at 15-minute or 30-minute intervals. This data will be publicly accessible through a dashboard.

- The County awarded ARPA funding to Warren County Soil & Water Conservation District to purchase and install a weather monitoring station at the Warren County Soil & Water Conservation District office which is operational.
- The Warren County Soil & Water District consults USGS-maintained stream gauges on the Hudson River and its tributaries at North Creek, Hadley, and Fort Edward; at the tributaries on the Boreas river, the Indian River in Indian Lake, the Sacandaga at Hope and Hadley and the Schroom at Riverbank. Streams that flow to Lake George have had stream gauges and flow data since the 70's during the National Urban Runoff Program study, and by NYSDEC (90's), Darrin Freshwater Institute (2000's) and currently by IBM and RPI (Jefferson Project) in East Brook, West Brook, English Brook, Finkle Brook, Indian Brook, Shelving Rock Brook, Hague Brook and at the outlet of Lake George.
- The County has created an app to enable real time reporting of hazard events. This app called ReadyWarrenCountyNY and has been shared on social media including on the County Facebook and local TV news station. The app provides information regarding hazards, including the location of cooling centers in the County. It also enables the publication of alerts for towns and villages and has the ability to geo-locate users for targeted outreach and messaging as needed. It can be used to support mitigation alerts and is linked to a storm reporter app to report storm observations, hazard areas, and photos. It is anticipated that the data gathered through this app will improve mitigation grant funding applications by providing information to support strong benefit cost analyses.

### Proposed Hazard Mitigation Initiatives for the HMP Update

Warren County participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.1-15. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X	X		X	X		X		X
Extreme Temperature	X	X	X	X	X	X	X	X		X
Flood	X	X		X	X	X			X	X



Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Severe Storm	X	X			X	X			X	X
Severe Winter Storm	X	X			X	X				X
Wildfire	X	X			X	X				X
Infestation	X	X			X	X				X
Dam Failure	X	X			X	X			X	X
Disease Outbreak	X			X	X		X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.1-16).

The table below summarizes the specific mitigation initiatives Warren County would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.1-16. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Warren County-001	Middleton Bridge Replacement	1	Earthquake, Extreme Temperature, Flood, Severe Storm	<p><b>Problem:</b> The Middleton Bridge (a historic structure) is located in the Towns of Bolton and Warrensburg and crosses the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed. This is a long-term project. It is in the design process currently.</p> <p><b>Solution:</b> The County will acquire property to build a new bridge in a different location. Once property rights are secured, the County will construct the bridge to withstand a 500-year flood event.</p>	No	Will require permitting	Within 10 years	WCDPW, A/GFTC, Towns of Bolton and Warrensburg	High	Vital transportation route reestablished	BRIC, PDM, HMGP, County budget	Low	SIP	PP
2023-Warren County - 002	Backup Power for Critical Facilities	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire	<p><b>Problem:</b> Critical facilities require backup power to maintain continuity of operations. The following critical facilities require backup power:</p> <ul style="list-style-type: none"><li>• Toney Pit facility</li><li>• North End DPW Facility</li><li>• South End DPW Facility</li><li>• Snow Removal Equipment building at Floyd Bennet Memorial Airport</li><li>• Old Shop</li></ul> <p><b>Solution:</b> The generators will provide continuous power for services to ensure the health and safety of residents, businesses and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen issues. Services such as heat and cooling will be uninterrupted to support the needs of vulnerable populations, community alerts and rapid inspections and</p>	Yes	None	Within 5 years	Engineer, Public Works	High	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, County Budget	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	Ct&S Category
				monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities. The County Engineer will research what size generator is needed to power each facility. The County will then purchase and install the selected generator and necessary electrical components to supply backup power to each facility. Public Works will be responsible for maintenance and testing of each generator following installation.										
2023-Warren County-003	Digitization of Dam Inundation Maps	6	Dam Failure	<b>Problem:</b> The County does not have full digitized dam inundation mapping. <b>Solution:</b> The County maintains hardcopy inundation maps for Butler, Keenan, and Wilkie. The County will digitize these for the next plan update (and for use in the interim).	Yes	No	Within 5 years	Warren County Office of Emergency Services	Staff time	Reduction of dam impacts	County budget	High	LPR	ES
2023-Warren County-004	13th Lake Road (County Route 78)	1	Earthquake, Extreme Temperature	<b>Problem:</b> 13th Lake Road (County Route 78) in the Town of Johnsbury has unstable slopes. The frost freeze cycle is problematic on the steep bare side slope. Rock/boulders have impacted the road and created hazardous driving conditions. Work has been done to reduce failures including new gabion baskets and grading of sections of the slope but additional efforts are needed. There is a private property issue – land rights, acquisition issues here. <b>Solution:</b> The County WCDPW will conduct an engineering study to explore potential strategies to reduce the landslide risk and implement cost-effective solutions.	No	None identified	Within 5 years	Public Works	TBD by engineering study	Reduction in landslides, road closures, hazardous driving conditions	BRIC, PDM, HMGP, CHIPS, County budget	High	NSP, SIP	NR, PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	Ct&S Category
2023-Warren County-005	Hazard Mitigation Planning Integration	4	All Hazards	<p><b>Problem:</b> Integration of hazard mitigation in County plans is limited.</p> <p><b>Solution:</b> The County will review and update County plans and encourage municipalities to update their plans to integrate goals, objectives, and activities from this HMP which are not found in existing regulatory documents, as appropriate. The County will work with the Adirondack Park Agency to integrate best floodplain management practices with the Park and will reference and integrate the hazard mitigation plan during the update of the comprehensive plan. As part of the integration the County will seek out projects that can be funded by the Climate Smart Program and which will increase resilience and sustainability.</p>	No	None	Within 5 years	Planning	Staff time	Integration of hazard mitigation	County budget	High	LPR	PR
2023-Warren County-006	Support Updated NFIP Mapping	4	Flood	<p><b>Problem:</b> The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.</p> <p><b>Solution:</b> To the extent applicable and feasible, the County shall use all available means of promoting broad local government and public involvement through announcing meetings and providing available supporting data as applicable.</p>	No	None	Within 5 years	FEMA, City of Glens Fall, Town of Lake Luzerne, Town of Queensbury with support from Warren County Public Information Office	Staff time	Improved floodplain mapping	County budget	High	LPR	PR
2023-Warren County-007	NFIP Floodplain Administration Support	1, 4	Flood	<p><b>Problem:</b> NFIP floodplain administration in the County's municipalities is often limited, requiring County support.</p> <p><b>Solution:</b> The County will provide support to municipalities as they work to update</p>	No	None	1 year	County, through WCSWCD and WCOES; promoting	Staff time	Increased floodplain administration capabilities at the local level	County budget	High	LPR	PR





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				and enhance local floodplain management regulatory capabilities through the following activities: <ul style="list-style-type: none"><li>Update and adopt the local Flood Damage Protection Ordinance (FDPO) to conform to latest regulations and guidance including the following:<ul style="list-style-type: none"><li>Proper identification of “Administrator”</li><li>Proper reference to current regulatory mapping and any other “best available data” being used</li><li>NYS mandate 2 foot freeboard requirement for all new construction</li></ul></li><li>Higher Regulatory Standards (per local interest):<ul style="list-style-type: none"><li>Cumulative Substantial Damages/Improvements</li></ul></li><li>Identify educational opportunities to increase the knowledge and capabilities of local staff including potential sponsorship of attendance at the 2024 NYSFSMA conference.</li></ul>				FEMA and NYS DEC						
2023–Warren County – 008	Climate Smart Communities	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire	<b>Problem:</b> Currently, only seven communities in Warren County participate in the Climate Smart Communities program with five communities and Warren County being certified (bronze certification). Additional participation in the program would allow for greater climate change preparation and county sustainability.	No	None	2 years	All County Departments and Agencies	Staff time	Greater climate change preparation and county sustainability.	County budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CIS Category
				<b>Solution:</b> The County will encourage County and Municipal participation in the Climate Smart Communities program. The County will work to improve its Climate Smart rating as it has adopted the Climate Smart Pledge/										
2023-Warren County-009	Countywide Disaster Debris Management Plan	3	All Hazards	<b>Problem:</b> The County lacks disaster debris management planning to provide adequate procedures to address post-disaster cleanup. <b>Solution:</b> The County will develop a plan for debris management after hazard events, including severe winter snow/ice events, and other severe storms. 5-Year County plan to be coordinated with DPW, all municipalities and NYSDEC. Include consideration of invasive species (e.g. Asian Longhorn Beetle, Emerald Ash Borer) on the generation of vegetative debris, and the overall management of that debris. This plan shall consider the debris management challenges presented by the 500-year event.	No	None	2 years	DPW, Warren County Office of Emergency Services	Staff time	Improved post-disaster capabilities	County budget	High	LPR	ES
2023-Warren County-010	County-Wide Housing Location/Relocation Planning Initiative	3	All Hazards	<b>Problem:</b> Warren County lacks a plan for supporting residents that require housing/relocation following a severe hazard event that results in destruction of their homes. <b>Solution:</b> Warren County Office of Emergency Services will develop and implement a program to work with all Warren County municipalities to identify sites within the community suitable for relocation of houses out of the floodplain or building new houses once properties in the floodplain are demolished. As part of this program, all communities will be surveyed	No	None	3 years	Warren County Office of Emergency Services, Municipalities	Staff time	Hazard Preparedness, Temporary housing secured	County budget	High	LPR	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	Ctr\$ Category
				to identify potential sites, including any pre-disaster actions that may be required to make them viable for these purposes. Further, this effort will include working with other County departments and regional and local stakeholders who own or manage potentially suitable sites (e.g. County parks) for the potential siting of temporary housing, and determining what improvements would need to be made to accommodate temporary housing (e.g. water, electric, sanitary services, bathing facilities), and that outside funding would likely be needed if such improvements were not already available.										
2023-Warren County-011	Substantial Damage Procedures	3	All Hazards	<p><b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.</p> <p><b>Solution:</b> The County will develop official procedures for Substantial Damage and Substantial Improvement determinations.</p>	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	County budget	High	LPR	PP, PR
2023-Warren County-012	Localized Flood Area Database/ Mapping	4	Flood	<p><b>Problem:</b> There are many areas affected by localized stormwater flooding that are not identified on FEMA FIRMs. FIRMs have been noted as being outdated or inaccurate in many municipalities.</p> <p><b>Solution:</b> The County will gather information of the location and history of flooding in unmapped areas of localized flooding to support the identification of problem areas and the associated projects to reduce flood risk. Input will be gathered using the County-developed <b>Ready Warren County NY</b> app in which location and damage data</p>	No	None	Within 5 years	Warren County GIS Dept. with support by County DPW and County SWCD	Staff time	Improved floodplain maps	County budget; HMA grants	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CIS Category
				(including photos) will be downloaded and process by the County for use in supporting mitigation projects to reduce the vulnerability of floodprone areas.										
2023-Warren County-013	Culvert Flood Capacity Initiative	1	Severe Storm, Flood	<p><b>Problem:</b> There are a number of undersized culverts in the County which contribute to localized flooding. While the County is addressing 300+ through a project grant through the Lake George and Lake Champlain Regional Planning Board, the County needs to review the remaining 900+ culverts.</p> <p><b>Solution:</b> Warren County Department of Public Works will determine the proper sizing and capacity, obtain funding, and upsize the following culverts which have been identified as undersized, causing localized flooding leveraging and explaining the current program.</p>	No	May require permitting	2 years	Warren County Department of Public Works	High (\$300,000)	Reduced road damages, improved emergency access	HMGP, BRIC, PDM, CHIPS, WQIP, County budget	High	SIP	SP
2023-Warren County-014	Vulnerable Population Temperature-Related Support Services	1, 2, 3	Extreme Temperature	<p><b>Problem:</b> Vulnerable populations may need immediate access to heating or cooling centers during periods of extreme temperatures and need current information regarding location of heating and cooling centers.</p> <p><b>Solution:</b> The County has an extreme heat response plan and updates website to show current cooling stations. The County work to identify additional locations and update available info. Warren County Emergency Services will create a protocol to provide up-to-date information regarding active heating and cooling centers via web updates and reverse notification systems.</p>	Yes	No	Within 5 years	Warren County Emergency Services	Staff time	Health and life safety improvements for vulnerable populations	County Operating Budget	High	EAP	PI, ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	C&S Category
2023-Warren County-015	Post-Flood Stream Intervention Training	1, 5	Flood	<p><b>Problem:</b> Communities do not have a clear understanding of the potential impacts of flooding on stream processes and related post-flood implications.</p> <p><b>Solution:</b> Warren County SWCD will provide education to municipal Highway Departments intended to be used as a tool to assist communities to better understand how streams function, why flooding occurs, and how to address impacts to communities.</p>	No	No	Annually, within 5 years	Warren County SWCD, municipal Highway Departments	Staff time	Reduction of flood damages and post-flood environmental impacts	County Operating Budget	High	EAP	PI
2023-Warren County-016	Support Loon Lake Dam Rehabilitation	6	Dam Failure	<p><b>Problem:</b> Loon Lake Dam is a high hazard dam under the jurisdiction of the Town of Chester. Failure of the dam would also impact State Highway Route 8/9. Rehabilitation of the dam is needed to protect from dam failure. An engineering study of the dam has been completed.</p> <p><b>Solution:</b> Warren County SWCD will provide a support role as the Town of Chester rehabilitates Loon Lake Dam, including providing technical expertise or support in any grant applications.</p>	Yes	Yes	Within 5 years	Warren County SWCD, Town of Chester	Staff time	Protection of high hazard dam	HHPD, County budget	High	SIP	SP
2023-Warren County-017	Digitization of Dam Inundation Maps	4	Dam Failure	<p><b>Problem:</b> Lack of digitized dam maps limits the ability of the county and dam owners to effectively mitigate risk due the lack of quantitative data regarding specific inundation impacts.</p> <p><b>Solution:</b> Warren County will digitize the dam inundation maps.</p>	No	No	Within 5 years	Warren County GIS	Staff time	Reduction of dam risk	County Operating Budget	High	LPR	PR
2023-Warren County-018	Disease Outbreak Notification	2	Disease Outbreak	<p><b>Problem:</b> There is a need for expanded notification services for disease outbreak warning throughout the county.</p> <p><b>Solution:</b> Warren County will provide and maintain links to the County's website with a webpage to notify residents of any</p>	No	No	Within 5 years	Warren County Public Health Department	Staff time	Health and safety improvements	County Operating Budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				disease outbreak and mitigation strategies. Public Health also maintains a Facebook page as well.										

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:		Potential FEMA HMA Funding Sources:		Timeline:	
CAV	Community Assistance Visit	FMA	Flood Mitigation Assistance Grant Program	The time required for completion of the project upon implementation.	
CRS	Community Rating System	HMGP	Hazard Mitigation Grant Program		
DPW	Department of Public Works	BRIC	Building Resilient Infrastructure and Communities Program	Cost:	
EHP	Environmental Planning and Historic Preservation			The estimated cost for implementation.	
FEMA	Federal Emergency Management Agency			Benefits:	
FPA	Floodplain Administrator			A description of the estimated benefits, either quantitative and/or qualitative.	
HMA	Hazard Mitigation Assistance				
N/A	Not applicable				
NFIP	National Flood Insurance Program				
OEM	Office of Emergency Management				

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

CRS Category:

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.



- *Natural Resource Protection (NR)*—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

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The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as ‘High’, ‘Medium’, or ‘Low.’ The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.1-17. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023–Warren County–001	Middleton Bridge Replacement	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023–Warren County–002	Backup Power for Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023–Warren County–003	Digitization of Dam Inundation Maps	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023–Warren County–004	13th Lake Road (County Route 78)	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023–Warren County–005	Hazard Mitigation Planning Integration	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023–Warren County–006	Support Updated NFIP Mapping	0	1	1	1	1	1	1	1	1	1	0	0	1	1	11	High
2023–Warren County–007	NFIP Floodplain Administration Support	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023–Warren County–008	Climate Smart Communities	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023–Warren County–009	Countywide Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023–Warren County–010	County-Wide Housing Location/Relocation Planning Initiative	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023–Warren County–011	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Warren County-012	Localized Flood Area Database/ Mapping	0	1	1	1	1	1	0	1	1	1	0	0	1	1	10	High
2023-Warren County-013	Culvert Flood Reduction Initiative	1	1	1	1	1	1	0	1	1	0	1	0	1	1	11	High
2023-Warren County-014	Vulnerable Population Temperature-Related Support Services	1	0	1	1	1	1	1	0	1	0	0	0	1	1	9	High
2023-Warren County-015	Post-Flood Stream Intervention Training	0	1	1	1	1	1	0	1	1	0	0	0	1	1	9	High
2023-Warren County-016	Support Loon Lake Dam Rehabilitation	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2023-Warren County-017	Digitization of Dam Inundation Maps	0	1	1	1	1	1	0	1	1	1	0	0	1	1	10	High
2023-Warren County-018	Disease Outbreak Notification	1	0	1	1	1	0	1	0	1	1	0	1	1	0	9	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.1.8 Action Worksheets

The following action worksheets were developed by Warren County to aid in the submittal of grant applications to support the funding of high priority proposed actions.

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Action Worksheet			
<b>Project Name:</b>	Critical Facility Backup Power		
<b>Project Number:</b>	2023-Warren County-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	Critical facilities require backup power to maintain essential functions during and after disaster events.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The City will purchase and install permanent fixed generators and necessary electrical components at the following facilities: <ul style="list-style-type: none"> <li>• Toney Pit facility</li> <li>• North End DPW Facility</li> <li>• South End DPW Facility</li> <li>• Snow Removal Equipment building at Floyd Bennet Memorial Airport</li> <li>• Old Shop</li> </ul>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	SWCD, Emergency Services	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000 per facility	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000 per facility	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
Project Name:	Critical Facility Backup Power	
Project Number:	2023-Warren County-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of critical facilities
Property Protection	1	Project will protect buildings from power loss.
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	SWCD, Emergency Services, Facility managers
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.2 TOWN OF BOLTON

This section presents the jurisdictional annex for the Town of Bolton that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Bolton's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.2.1 Hazard Mitigation Planning Team

The Town of Bolton identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including Planning and Zoning and the Engineer. The Director of Planning and Zoning represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.2-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name/Title: Joshua Westfall, AICP, Director of Planning and Zoning Address: 4949 Lake Shore Drive, Bolton Landing, NY 12814 Phone Number: 518-644-2893 Email: Westfall.J@Town.Bolton.NY.US		Name/Title: Richard Roman – Code Enforcement Address: 4949 Lake Shore Drive, Bolton Landing, NY 12814 Phone Number: 518-644-2893 Email: Roman.R@Town.Bolton.NY.US	
NFIP Floodplain Administrator			
Name/Title: Joshua Westfall, AICP Address: 4949 Lake Shore Drive, Bolton Landing, NY 12814 Phone Number: 518-644-2893 Email: Miller.R@Town.Bolton.NY.US			
Additional Contributors			
Name/Title: Joshua Westfall, AICP, Director of Planning and Zoning			



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on previous events, capabilities, NFIP administration, status update on past actions, reviewed annex, provided input on hazard rankings, contributed to mitigation strategy.	
Name/Title: Cheryl Bolton – Planning and Zoning Secretary Method of Participation: Assist in compiling information.	
Name/Title: Matt Coon – Dep. Highway Superintendent Method of Participation: Assist in compiling information.	

## 9.2.2 Municipal Profile

The Town of Bolton is in the Adirondack Mountains in New York State and is located between the shores of Lake George to the east and the Schroon River to the west. It is found in eastern Warren County. The Town is bordered to the north by the Towns of Horicon and Hague, to the south by the Town of Lake George and Lake George, to the east by Lake George, and to the west by the Town of Warrensburg. The following hamlets are found in the Town of Bolton: Bolton, Bolton Landing, North Bolton, and Riverbank. Basin Bay, Boon Bay, Huddle Bay, Northwest Bay, Lake George, and Trout Lake are the major bodies of water found throughout the Town. Additionally, the Cat and Thomas Mountain areas and the Tongue Mountain Range are mountainous areas within the community.

The Town has a total area of 90.1 square miles, of which, 63.4 square miles is land and 26.7 square miles is water.

Glens Falls Hospital services the region for emergency and major medical care. Urgent Care is provided in Warrensburg by Hudson Headwater Healthcare Urgent Care Center. Routine medical care is provided in Bolton by the Bolton Health Center, operated by Hudson Headwaters.

According to the U.S. Census, the 2020 population for the Town of Bolton was 2,012, a 13.5 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 2.8 percent of the population is 5 years of age or younger and 28.7 percent is 65 years of age or older. It should be noted however that since the pandemic, there has been an increase in the conversion of seasonal homes to year-round residences; this assertion is supported by a general increase in voter registration for that period (Warren Co. BOE).

Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Bolton has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 6.03% of the population does not have a high school diploma
- 22.39% of the population has a disability
- 4.88% of households do not have a vehicle
- 5.85% of the population is living below the poverty level
- 2.08% of the population is unemployed





### 9.2.3 Jurisdictional Capability Assessment and Integration

The Town of Bolton performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Bolton to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

#### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Bolton. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.2-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes – (Warren Co.)	New York State Uniform Code and the Energy Conservation Construction Code	County	Warren Co. Fire Prevention & Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Bolton follows the New York State Uniform Code and the Energy Conservation Code to ensure standards to protect new development.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 200 – Zoning	Local	Zoning Admin. Zoning & Planning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>Zoning Ordinance is in place to promote the health, safety, and general welfare of the community and to protect the property values and aesthetics of the community by channeling and directing growth and by regulating and restricting the height, number of stories and size of buildings and other structures, the percentage of lot that may be occupied, the size of yard, courts and other open spaces, the density of population and the location and use of buildings, structures and land for trade, industry, residence and other purposes, to the maximum extent permissible within the proper exercise of the police power as delegated by the Town Law.</p> <p>The Zoning Code outlined requirements for all proposals subject to administrative and Board reviews and outlines the requirements for identifying flood-prone locations on any submitted plans.</p>				
<b>Subdivision Ordinance</b>	Yes	Chapter 150 – Subdivision of Land	Local	Planning Board Zoning Admin. Zoning & Planning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Ordinance requires approval of any application for subdivision of land and proposed subdivisions of existing lands before any action can be taken. The Subdivision law permits cluster subdivisions to preserve environmental resources and take advantage of siting infrastructure. .</p>				
<b>Site Plan Ordinance</b>	Yes	Chapter 200 – Article 5 (approval of Site Plans and Certain Uses)	Local	Planning Board Zoning Admin. Zoning & Planning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>As outlined in the Zoning Code, hazard areas, to include flood plains, are to be shown on any plan proposals.</p>				
<b>Stormwater Management Ordinance</b>	Yes	Chapter 125 – Stormwater and Erosion Control	Local	Zoning Admin. Zoning & Planning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Ordinance protects and safeguards the general health, safety, and welfare of the public residing in or visiting the Town by preserving and protecting the quality of the ground and surface waters. The Chapter differentiates between Major and Minor stormwater projects and outlines different requirements for each including approval processes.</p>				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	–	–	–
<b>Real Estate Disclosure</b>	Yes – (NYS)	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.</p>				
<b>Growth Management</b>	No	–	–	–
<b>Environmental Protection Ordinance</b>	Yes	Town of Bolton Waterfront Consistency Review Law	Local	Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The purpose of this local law is to provide a framework to incorporate the policies of the Towns Local Waterfront Revitalization Program.				
<b>Flood Damage Prevention Ordinance</b>	Yes	Local Law No. 1 of the year 1996, Flood Damage Prevention	Federal, State, County and Local	Zoning Administrator
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> <li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.</li> <li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.</li> <li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.</li> <li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages.</li> <li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.</li> <li>F. Qualify for and maintain participation in the National Flood Insurance Program.</li> </ul> <p>The ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.</p>				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	No	-	-	-
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Comprehensive Plan 2003	Local	Zoning and Planning
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Town Comprehensive Plan was established to monitor the growth and development of the Town.</p>				
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	No	In Process: Drinking Water Source Protection Program	Local	Dir. Of Planning & Zoning Planning & Zoning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The Drinking Water Source Protection Program will examine the Edgecomb Pond watershed area in the central part of Town. Edgecomb Pond is the Town of Bolton's sole drinking water source. Water in Edgecomb Pond is held behind concrete dam rated as C.				
<b>Stormwater Management Plan</b>	Yes	Chapter 125	Local	Zoning Admin. Planning & Zoning
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	Yes	Local Waterfront Revitalization Pan	Local	Town Board, Planning Board, Zoning Board of Appeals, Zoning Administrator, Planning & Zoning Office
How has or will this be integrated with the HMP and how does this reduce risk?				
The LWRP considers resources and appropriate development along the Town's many waterfronts.				
<b>Response/Recovery Planning</b>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Comprehensive Emergency Management Plan</b>	Yes	Emergency Action Plan	Local	Town Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan includes evacuation protocols and is updated annually.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<b>Public Health Plan</b>	Yes	Public Employer Health Emergency Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan identifies work procedures and key personal in the event of a pandemic situation.				
<b>Other</b>	Yes	Public Employer Health Emergency Plan	Local	Town Board

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Bolton to oversee and track development.

**Table 9.2-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
• If you issue development permits, what department is responsible?	N/A	Planning & Zoning
• If you do not issue development permits, what is your process for tracking new development?	N/A	County Building Permits
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Flood Zone Permit
Do you have a buildable land inventory?	No	-
• If you have a buildable land inventory, please describe	N/A	-



Indicate if your jurisdiction implements the following	Yes/No	Comment:
Describe the level of build-out in your jurisdiction.	N/A	Roughly 25 percent of the Town has been developed. Much of the remaining land is protected.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Bolton and their current responsibilities that contribute to hazard mitigation.

**Table 9.2-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board is charged with specific duties and responsibilities to include; review of site plans, stormwater & subdivision plans; holding public hearings and forwarding recommendations on proposed zoning changes; and reviewing major developments
Zoning Board of Adjustment	Yes	The primary role of a Zoning Board is to review and decide cases where a relaxation of the ordinance is sought or where there is an alleged error in a zoning decision. In general, the Zoning Board of Appeals is the body established to: hear appeals of decisions rendered by zoning administrators, interpret unclear provisions in the zoning ordinance, decide on applications by landowners to permit buildings or land uses which vary from the zoning regulations
Planning Department	Yes	Planning and Zoning Department is responsible for code enforcement as well as permit review and approval, maintaining building codes, grant coordination and administration, inter-department collaboration, and code revisions.
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Bolton Community Development Program
Public Works/Highway Department	Yes	The Highway Department oversees maintaining the town roads and sidewalks throughout the Town of Bolton. They pave roads, install or repair culverts, clean the shoulders of the roads, sweep the streets and plow and sand to keep the roads safe all year round
Construction/Building/Code Enforcement Department	Yes	See Planning Department
Emergency Management/Public Safety Department	No	-
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Emergency Text Alert System



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Parks/ Building and Grounds at Town Facilities. Town Highway along Town rights-of-way.
Mutual aid agreements	Yes	Neighboring Municipalities and DPW
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Director of Planning and Zoning/Zoning Administrator, Zoning Enforcement Officer, Town-Designated Engineer(s)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town-Designated Engineer
Planners or engineers with an understanding of natural hazards	Yes	Director of Planning and Zoning/Zoning Administrator, Town-Designated Engineer
Staff with expertise or training in benefit/cost analysis	Yes	Director of Planning and Zoning/Zoning Administrator, Planning and Grant Consultants
Professionals trained in conducting damage assessments	Yes	Building Department/Code Officials, Outside Contractor
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Director of Planning and Zoning/Zoning Administrator
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	Director of Planning and Zoning, Consultant
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-
<b>Administrative/technical capability self-assessment</b>		
<p><b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b></p> <p>The considerable skill level enumerated above represents skill and knowledge across a spectrum of disciplines. The 2021 addition of a AICP certified Town Planner (Dir. of P &amp; Z) has expanded in-house opportunities for code and ordinance updates, grant surveillance, grant writing, grant administration, coordination between boards and departments, and enhanced zoning enforcement.</p>		

## Fiscal Capability

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

**Table 9.2-5. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	No





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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Bolton.

**Table 9.2-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	Supervisor's Office – Text Message Alert System
Personnel skilled or trained in website development	Yes	Supervisor's Office, Planning and Zoning Office
Hazard mitigation information available on your website	Yes	Information from this hazard mitigation plan is shared on the Town website.
Social media for hazard mitigation education and outreach	No	–
Citizen boards or commissions that address issues related to hazard mitigation	No	–
Warning systems for hazard events	Yes	Text Message Service
Natural disaster/safety programs in place for schools	No	–
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"><li>If yes, please describe.</li></ul>	Yes	Text Message Service

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Bolton.

**Table 9.2-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Protection (ISO Fire Protection Classes 1 to 10)	No	–	–
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Registered	February 7, 2022
Storm Ready Certification	No	–	–
Firewise Communities classification	No	–	–
Other	No	–	–

Note:

N/A Not applicable

– Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.2-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Strong
Flood	Strong
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Strong
Earthquake	Moderate
Extreme Temperature	Strong
Flood	Strong
Severe Storm	Strong

### 9.2.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.



## National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Bolton.

**Table 9.2-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Bolton	8	5	\$40,328	0	0	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Bolton.

**Table 9.2-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	Locations where undersized bridges or culverts exist (mountainous areas, East Schroon River Road, private roads) are floodprone. The Town does not maintain a list of properties damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	Code Enforcement and Planning and Zoning Office reviews damage and determines substantial- also reviewed by County Building Dept.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	Yes
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Planning and Zoning



NFIP Topic	Comments
Are any certified floodplain managers on staff in your jurisdiction?	Yes – Floodplain Administrator
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes. New York State guidance.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Review of Past Files
What are the barriers to running an effective NFIP program in the community, if any?	Limited Flood Plain Area
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The most recent CAV was June 6, 2013.
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Chapter 200, 125, and 150
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meet
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Site Plan Review, Stormwater Management and Erosion, Subdivision Review
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not participating

## 9.2.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its



hazards of concern. Table 9.2-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.2-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	16	N/A	11	N/A	13	N/A	15	N/A	20	N/A	18	N/A
Multi-Family	0	N/A	4	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	3	N/A	4	N/A	3	N/A	4	N/A	3	N/A	2	N/A
Total New Construction Permits Issued	19	N/A	19	N/A	16	N/A	19	N/A	23	N/A	20	N/A
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
Twin Bolton	Residential	21		4799 Lake Shore Drive		None		Preliminary Approval				
Capri Village	Residential	17		3926 Lake Shore Drive		None		Preliminary Approval				
Larkin Campground	Commercial, campground	104 campsites		863 E Schroom River Road		Flood		Final Approval				

SFHA Special Flood Hazard Area (1% flood event)

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

Note: Information on permits within the SFHA was unavailable for this planning process.

## 9.2.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Bolton's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Bolton has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.





Figure 9.2-1. Town of Bolton Flood Hazard Area Extent and Location Map

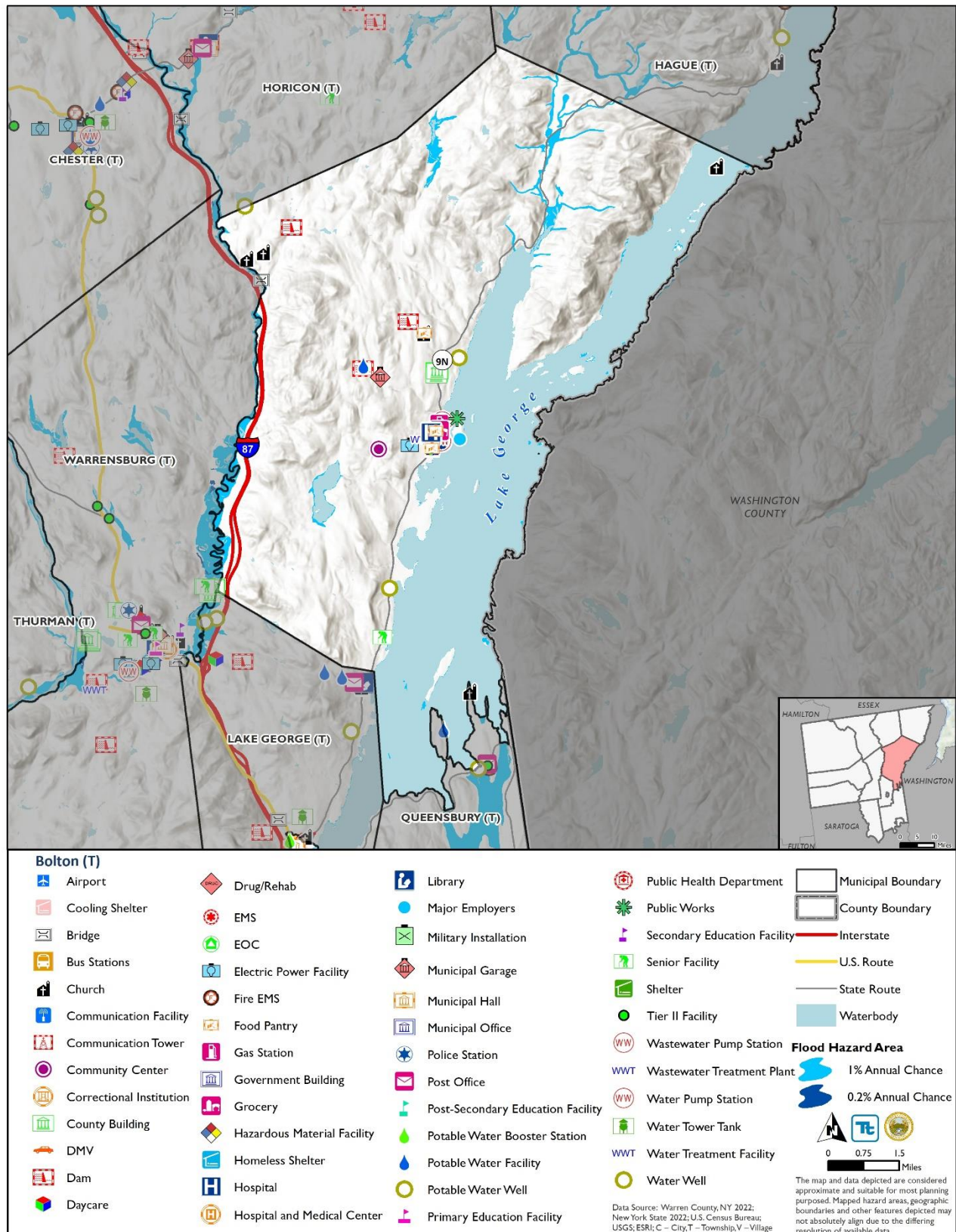




Figure 9.2-2. Town of Bolton Earthquake (Soil Class) Hazard Area Extent and Location Map

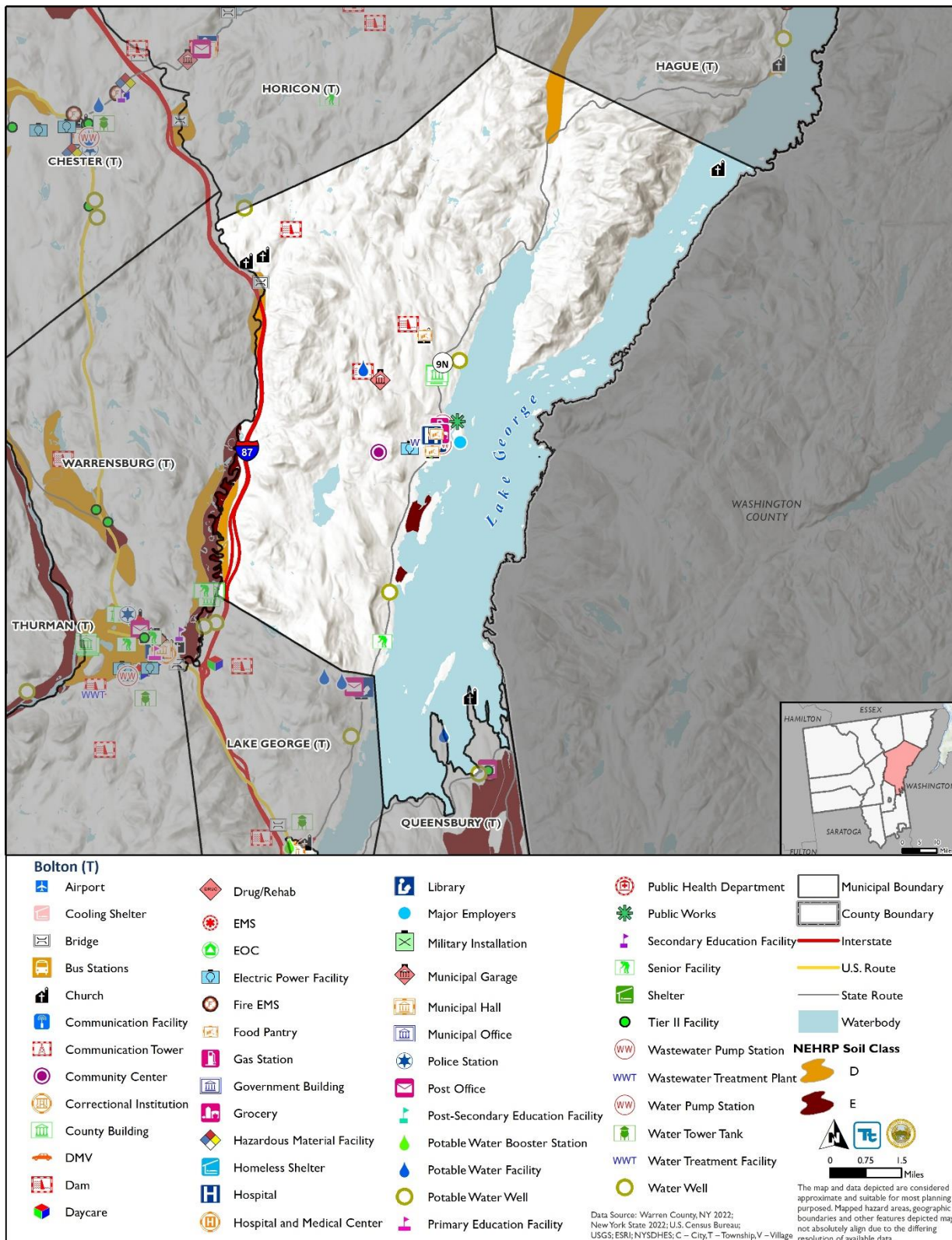
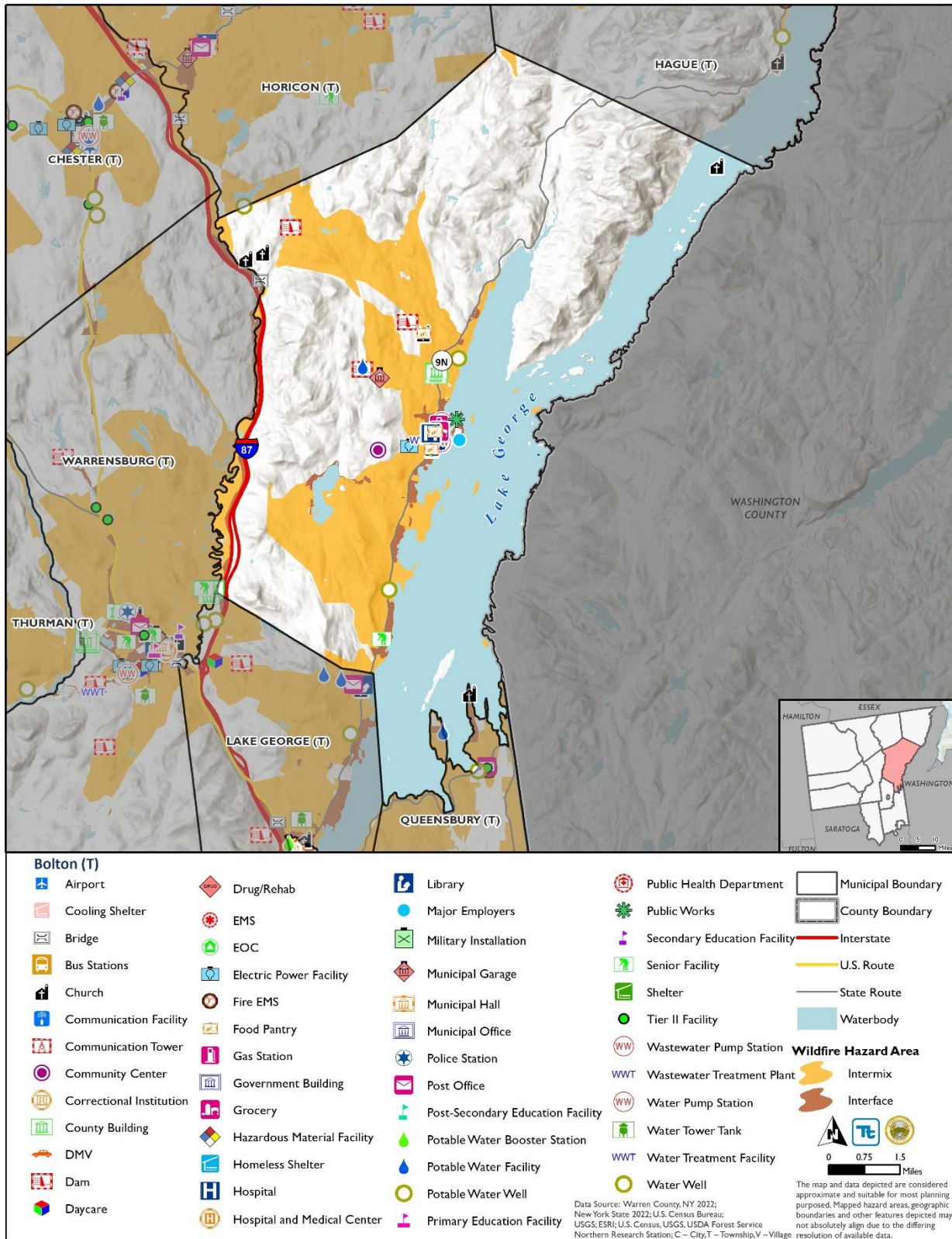






Figure 9.2-3. Town of Bolton Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Bolton's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.2-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.2-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
December 26 – 27, 2019	Ice Storm	N/A	Ice storm covering tree limbs and power lines causing breakage and power outage.	Multiple areas in Bolton without power, due to fallen powerlines. Debris removal and chipping of fallen limbs occurred due to this event.
March 14 – 15 2017	Severe Storm with blizzard like conditions.	N/A	Blizzard like conditions, 20–24 inches of snow. Extreme winds causing limited visibility and falling trees.	Clearing and maintaining accessible roadway through Bolton. Multiple areas in Bolton without power.
March 16 – 17 – 20, 2017	Severe wind and snow conditions.	N/A	Continuation of opening roadways.	Clearing and maintaining accessible roadway through Bolton
May 6 – 9, 2017	Flooding/Beaver	N/A	Flooding due to beaver dam and pond overflow. Roadway in need of complete replacement.	Padanarum Road was stripped to bare ledge. Road repair included multiple loads of Item #4, replacement of two, 24' x 40' and one 24' x 40' culverts.
October 30 – 31, 2017	Windstorm	N/A	Severe early morning, 3:30am winds causing trees down and multiple roadways unpassable.	Multiple areas in Bolton without power, due to fallen powerlines. Debris removal and chipping throughout Bolton.
December 23 – 24, 2017	Ice Storm	N/A	Ice storm covering tree limbs and power lines causing breakage and power outage.	Clearing trees from multiple roadways.
August 4 –5, 2018	Heavy Rainfall and Wind	N/A	Heavy rain and wind resulting in trees and powerlines down in Bolton.	Debris removal and chipping of fallen limbs occurred due to this event.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
November 9 –10, 2018	Heavy wet Snow event	N/A	Heavy wet snow, 12 plus inches, causing trees down throughout Bolton.	Clearing trees from multiple roadways to gain plowing access.
November 25, 2018	Rain to Ice Storm	N/A	Ice storm covering tree limbs and power lines causing breakage and power outage.	Multiple roadways blocked. Chipping limbs and clearing debris
June 24 – 26, 2019	Flooding/Beaver	N/A	Flooding due to beaver dam and pond overflow. Roadway and culvert in need of replacement.	Padanarum Road repair included multiple loads of Item #4, replacement of two, 12' x 30', one 36' x 40' and one 36' x 60' culverts.
October 17 – 19, 2019	Wind and Rainstorm	N/A	Heavy rain and wind causing trees down and debris covered roads in Bolton	Multiple areas in Bolton without power, due to fallen powerlines. Debris removal and chipping throughout Bolton.
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low-pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	Significant damage to roadways in the northern portion of the Town of Bolton resulting in the washout of numerous culverts and three bridges severing access to a significant portion of Padanaram Road. Work is still ongoing and the lower portion of Padanaram Road remains inaccessible. The Town, along with NYS in securing FEMA funding
January 11 – 12, 2020	Heavy Rainfall	N/A	Heavy rain, spike of unseasonal warm temperatures caused flooding Substantial damage to roadways in northern Bolton	Washouts on Trout Falls Rd., Hendricks Rd. and Padanarum Rd.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19	Lost revenue in the busy summer tourism season and numerous closures of public facilities due to State and Federal guidelines.
June 8 – 9, 2020	Flooding/Beaver	N/A	Flooding due to beaver dam and pond overflow. Roadway and culvert in need of replacement.	Trout Falls Road repair included multiple loads of Item #4, and replacement of and one 40' x 15' culvert.
December 24-25 and	Heavy Rainfall and Flooding	N/A	There was severe rainfall and flooding damage throughout Bolton.	Road repair and washout repair on



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
28-29, 2020				several Town roads. Significant need on Trout Falls Rd., East. Schroon River Rd. and Dixon Hill Rd.
July 30 – August 1, 2021	Heavy Rainfall	N/A	Heavy rain and flooding in Bolton	Significant road repair and washout repair on Padanarum Rd. and East Rd. (Spur Rd.).
December 11 – 12, 2021	Significant wind and Rain	N/A	Heavy freezing rain and wind in Bolton	Multiple areas in Bolton without power, due to fallen powerlines. Debris removal and chipping of fallen limbs occurred due to this event.

**Notes:**

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Bolton's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Bolton. The Town of Bolton reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:





- The Town changed the hazard ranking for flood from low to medium, noting that failing and undersized culverts have led to increased flood risk in the Town.
- The Town agreed with the remaining calculated hazard rankings.

**Table 9.2-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Medium	High	High	Medium	Medium

Dam Failure	Disease Outbreak
High	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.2-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
None identified					

Source: Warren County 2022

### Identified Issues

After review of the Town of Bolton's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Bolton identified the following vulnerabilities within their community:

- The Hamlet of Bolton experiences periodic stormwater flooding.



- An auxiliary spillway is needed for the Edgecomb Pond Dam. The Dam (owned by Bolton Water District) is in need of some improvements. The Town is in the process of contracting for a structural evaluation of the existing dam.
- Critical facilities require backup power to maintain essential functions during and after disaster events.
- Additional training for wildfire response is needed for Town officials.
- Additional flood education is needed for the Town's residents to encourage better awareness, personal mitigation choices, and NFIP coverage.\*
- The Town uses the Red Alert notification system for emergency notifications, but the coverage and use of the system is unknown.\*
- Continual beaver dam breaches result in flooding and damages to local roads and culverts.
- The Town Highway Department has identified numerous culverts in need of upsizing. Culverts have previously been damaged due to deficiencies. 2019 flooding resulted in significant damage and roadway washouts.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals.
- The Middleton Bridge is located in the Towns of Bolton and Warrensburg and crosses the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed.
- An assessment of the main pump station on the shore of Lake George is underway to determine the necessary improvements to the facility.
- Improved firefighting capabilities are needed to respond to wildfire.
- In order to have the necessary water supply to fight wildfire events, improvements are needed to the Town's water infrastructure.
- Improved coordinated responses are needed to address potential dam failure events and mitigation of possible inadequacies.
- There is a history of private roadway flooding caused by stormwater inadequacies.

\*This issue was identified as a specific area of concern based on resident response to the Warren County Hazard Mitigation Citizen survey.

### 9.2.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going



programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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**Table 9.2-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost		
1	Develop a Hamlet-wide Stormwater Drainage System plan for the Hamlet of Bolton	Flood		Planning, Town Board	No Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
						Damages Avoided; Evidence of Success		
2	Adopt and implement the Local Waterfront Revitalization Plan (draft released in July, 2014).	All Hazards		Town Board	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection	Additional Protection for Waterfront Resources	
						Damages Avoided; Evidence of Success		
3	Edgecomb Pond Dam Auxiliary Spillway Development Project: Install an auxiliary spillway for the dam which provides water to hamlet (built-up) area. Drainage easements have been acquired in area where new spillway would be built.	Flood		Bolton Water District, Town Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
4	Edgecomb Pond Dam Upgrades: Make structural upgrades and improvements of the existing Edgecomb Pond Dam as called for by the upcoming structural evaluation. The Dam (owned by Bolton Water District) is in need of some improvements. The Town is in the process of contracting for a structural evaluation of the existing dam	Flood		Bolton Water District, Town Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



## SECTION 9.2. Town of Bolton

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost		
5	Obtain funding to purchase generators for municipally-owned critical facilities, including the School and town hall.	All Hazards		Town Supervisor, County Office of Emergency Services	No Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
						Damages Avoided; Evidence of Success		
6	Send a town representative to the NYS Wildland Fire Suppression Training	Wildfire		Fire Department, Town Supervisor	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						1. Damages Avoided; Evidence of Success		
7	Distribute county-provided educational materials on benefits of carrying NFIP policies and increase knowledge of NFIP services, and provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding.	Flood		County Office of Emergency Services, Town Floodplain Administrator, Town Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
8	Apply for grants to assist with mitigation activities including Edgecomb Pond Dam projects and backup power provisions for the school and Town Hall.	All Hazards		Town Board	No Progress	Cost		1. Discontinue 2. 3. Funding acquisition will be part of the individual projects.
						Level of Protection		
						Damages Avoided; Evidence of Success		
9	Conduct an advanced mapping of all households, businesses, and other property owners who have signed up for Red Alert notification system, and where they lie in relationship to hazard areas.	All Hazards		Town Planning, Town Planning Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
10	Develop and implement a strategy to mitigate risk to public and property from beaver dam breaches.	Flood	Continual beaver dam breaches affecting local roads and culverts	Town Board, County	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost		
11	Culverts improvements, as called for by the Town Highway Department. Specifically, the following culverts will be replaced: <ul style="list-style-type: none"> <li>6 culverts on Padanarum Rd</li> <li>8 culverts on Wall Street</li> <li>12 culverts on E. Schroon River Rd</li> <li>8 culverts on S. Trout Lake Rd</li> <li>5 culverts on Upper/ Lower Brerton with catch basins</li> <li>7 culverts on Finkle Rd.</li> <li>8 culverts on Mohican Rd, 3 with catch basins</li> </ul>	Flood	Numerous culverts replacements on Padanaram Rd. due to storm damage and FEMA funding. TL road culverts replaced due to storm damage. Need additional culvert works on E. Schroon, Wall Street, Brereton, S. Trout Lake as well as other areas.	Town Highway Department	In Progress	Level of Protection	500,000+	1. Include in 2023 HMP 2. 3.
						Damages Avoided; Evidence of Success	Protect town roads Replacement in kind	
12	Install a dry hydrant at the water company property at Edgecomb Pond.	Fire		Town DPW	Ongoing Capability	Cost.	Unknown	1. Discontinue 2. 3. Ongoing capability
						Level of Protection	Use for fire connections and benefit emergency water system connections to water plant.	
						Damages Avoided, Evidence of Success	Fire damage.	



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.2-15, the Town of Bolton identified the following mitigation efforts completed since the last HMP:

- None identified

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Bolton participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.2-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X	X	X	X	X	X	X	X	X
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm	X	X		X	X	X	X			X
Wildfire	X	X		X	X	X	X			X
Infestation	X	X	X	X	X	X	X	X		X
Dam Failure	X	X		X	X	X	X		X	X
Disease Outbreak	X	X		X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.2-17).

The table below summarizes the specific mitigation initiatives the Town of Bolton would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.2-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Bolton-001	Hamlet of Bolton Stormwater Drainage System Plan	1, 3	Flood	<b>Problem:</b> The Hamlet of Bolton experiences periodic stormwater flooding. <b>Solution:</b> The Town will develop a Hamlet-wide Stormwater Drainage System plan for the Hamlet of Bolton and enact any identified cost-effective stormwater infrastructure improvements.	No	None	Within 5 years	Planning, Town Board	Medium for planning effort, TBD for cost-effective infrastructure improvements	Reduction in stormwater flooding	BRIC, HMGP, PDM, CHIPS, Town budget	High	LPR	PR, SP
2023-Town of Bolton-002	Edgecomb Pond Dam Auxiliary Spillway Development Project	1, 6	Dam Failure	<b>Problem:</b> An auxiliary spillway is needed for the Edgecomb Pond Dam. The Dam is a high hazard dam. <b>Solution:</b> Install an auxiliary spillway for the dam which provides water to hamlet (built-up) area. Drainage easements have been acquired in area where new spillway would be built.	Yes	Permitting may be required	Within 5 years	Bolton Water District, Town Board	High	Prevention of dam failure	BRIC, HMGP, PDM, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Bolton-003	Edgecomb Pond Dam Upgrades	1, 6	Dam Failure	<p><b>Problem:</b> The Edgecomb Pond Dam is a high hazard dam. The dam (owned by Bolton Water District) is in need of some improvements. The Town is in the process of contracting for a structural evaluation of the existing dam.</p> <p><b>Solution:</b> Make structural upgrades and improvements of the existing Edgecomb Pond Dam as called for by the upcoming structural evaluation.</p>	Yes	Permitting may be required	Within 5 years	Bolton Water District, Town Board	High	Prevention of dam failure	BRIC, HMGP, PDM, Town budget	High	SIP	SP
2023-Town of Bolton-004	Generators for Critical Facilities	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<p><b>Problem:</b> Critical facilities require backup power to maintain essential functions during and after disaster events.</p> <p><b>Solution:</b> The Town will purchase and install permanent fixed generators and necessary electrical components at the following facilities:</p>	Yes	None	Within 5 years	Town Supervisor, County Office of Emergency Services	High	Protect public health and safety and ensure continued operation of critical facility and essential functions during power outages.	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program,	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<ul style="list-style-type: none"><li>• Town Hall/ Police</li><li>• Bolton Fire District</li><li>• Community Center</li></ul> <p>The generators will provide continuous power for services to ensure the health and safety of residents, businesses and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen issues. Services such as heat and cooling will be uninterrupted to support the needs of vulnerable populations, community alerts and rapid</p>							Municipal Budget			





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				inspections and monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities.										
2023-Town of Bolton-005	Wildland Fire Suppression Training	3	Wildfire	<b>Problem:</b> Additional training for wildfire response is needed for Town officials. <b>Solution:</b> The Town will send a representative to the NYS Wildland Fire Suppression Training.	No	None	Within 5 years	Fire Department, Town Supervisor	Staff time	Increased wildfire emergency response capabilities	Town budget, NY	High	LPR	ES
2023-Town of Bolton-006	Flood Education and Outreach	2	Flood	<b>Problem:</b> Additional flood education is needed for the Town's residents to encourage better awareness, personal mitigation choices, and NFIP coverage. <b>Solution:</b> The Town will distribute county-provided educational	No	None	Within 2 years	County Office of Emergency Services, Town Floodplain Administrator, Town Board	Low	Increased flood awareness	County budget, Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				materials on benefits of carrying NFIP policies and increase knowledge of NFIP services, and provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding.										
2023-Town of Bolton-007	Red Alert Notification System Coverage Mapping	2, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<p><b>Problem:</b> The Town uses the Red Alert notification system for emergency notifications, but the coverage and use of the system is unknown.</p> <p><b>Solution:</b> The Town will conduct an advanced mapping of all households, businesses, and other property owners who have signed up for Red Alert notification system, and where they lie in relationship to hazard areas. The system mapping will</p>	No	None	Within 5 years	Town Planning, Town Planning Board	Low	Identification of emergency notification coverage issues to inform outreach	Town budget	High	EAP	PI, ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				be used to increase preparedness for earthquake, extreme temperature, flood, severe storm, severe winter storm, wildfire, infestation, dam failure, and disease outbreak events.										
2023-Town of Bolton-008	Beaver Dam Strategies	5	Flood, Infestation and Invasive Species	<p><b>Problem:</b> Continual beaver dam breaches result in flooding and damages to local roads and culverts.</p> <p><b>Solution:</b> The Town will develop and implement a strategy to mitigate risk to public and property from beaver dam breaches. The strategy will include an assessment of waterways with beaver dams and development of proposed mitigations including fencing, intake pipes, and remove of adjacent vegetation. Maintenance</p>	No	Yes, some solutions may not be available due to beaver restrictions	Within 5 years	Town Board, NYS DEC, Private property owners, Warren County Soil and Water Conservation District (SWCD)	TBD by identified strategies	Reduction in beaver dam failure flood events	Town budget	High	NSP	NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Bolton-009	Culvert Replacement and Upsizing	1	Severe Storm, Flood	<p>strategies will be evaluated.</p> <p><b>Problem:</b> The Town Highway Department has identified numerous culverts in need of upsizing. Culverts have previously been damaged due to deficiencies. 2019 flooding resulted in significant damage and roadway washouts.</p> <p><b>Solution:</b> The following culverts will be replaced and upsized:</p> <ul style="list-style-type: none"><li>• 8 culverts on Wall Street</li><li>• 12 culverts on E. Schroon River Rd</li><li>• 8 culverts on S. Trout Lake Rd</li><li>• 5 culverts on Upper/ Lower Brerton with catch basins</li><li>• 7 culverts on Finkle Rd.</li><li>• 8 culverts on Mohican Rd, 3</li></ul>	No	May require permitting at some locations	Within 5 years	Town Highway Department, Warren County	High	Reduction in flooding, flood damages to culverts and roadways	Bridge NY, HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				with catch basins Other locations will be identified as necessary. Coordination will take place with the County where necessary due to ownership.										
2023-Town of Bolton-O10	Flood Damage Prevention Ordinance Update	1, 4	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement. <b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LPR	PR
2023-Town of Bolton-O11	Substantial Damage Procedures	1, 3, 4	Earthquake, Flood, Severe Storm, Severe Winter Storm,	<b>Problem:</b> While major events that result in substantial damage of structures are rare, municipalities need to have official	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal Budget	High	LPR	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Wildfire, Dam Failure	procedures in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations for earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazards..										
2023-Town of Bolton-O12	Middleton Bridge Replacement	1	Earthquake, Extreme Temperature, Flood, Severe Storm	<b>Problem:</b> The Middleton Bridge is located in the Towns of Bolton and Warrensburg and crosses the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed. <b>Solution:</b> The Town will support the County's efforts to replace and improve the bridge and to increase in freeboard	No	Will require permitting	Within 5 years	WCDPW, A/GFTC, Town of Bolton Administration, Town of Warrensburg	High	Vital transportation route reestablished	BRIC, PDM, HMGP, County budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				or elimination of obstacles in channel provide data and information as necessary.										
2023-Town of Bolton-013	Main Pump Station on Shore of Lake George	1	Flood, Severe Storm	<b>Problem:</b> An assessment of the main pump station on the shore of Lake George is underway to determine the necessary improvements to the facility. <b>Solution:</b> Based on the results of the assessment, the Town will either replace and improve the pump station to harden or increase capacity or make the necessary upgrades to protect from hazard events and maintain service.	Yes	None	Within 5 years	Engineer	TBD by assessment	Maintain critical services of pump station	Northern Border, Congressional Funding Requests, DEC- WQIP, EFC, HMGP, PDM, Town budget	High	SIP	SP
2023-Town of Bolton-014	Fire District Capability Improvements	3	Wildfire	<b>Problem:</b> Improved firefighting capabilities are needed to respond to wildfire. <b>Solution:</b> The Town will assist with the	No	None	Within 5 years	Fire District, Administration	High	Improved wildfire fighting capabilities	Assistance to Firefighters Grant Program	High	SIP	ES





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				purchase of brush fire and wildfire equipment.										
2023-Town of Bolton-015	Water Infrastructure and Availability	1, 2	Wildfire	<p><b>Problem:</b> In order to have the necessary water supply to fight wildfire events, improvements are needed to the Town's water infrastructure.</p> <p><b>Solution:</b> The Town will complete the following improvements to the water infrastructure system: Upgrades to PRV Station; Comprehensive right-sizing of distribution system; Consideration of capital budgeting financed through infrastructure/ capital assessments/ fees; Explore alternative to reservoir (low water levels Fall 2022); Outreach to residents to conserve water</p>	Yes	None	Within 5 years	Planning, Water Department	High	Water supply maintained	Capital budget	High	SIP, EAP	PP, PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Bolton-016	Dam Failure Capability Improvements	1, 3, 6	Dam Failure	<p>during times of drought.</p> <p><b>Problem:</b> Improved coordinated responses are needed to address potential dam failure events and mitigation of possible inadequacies.</p> <p><b>Solution:</b> The Town will initiate better coordination between entities responsible for dam maintenance and emergency response to identify improvement necessary to upgrade and protect dams and improve response capabilities. The coordination will result in the development of a stakeholder outreach plan for dam maintenance and emergency response. The Town will be responsible</p>	Yes	None	Within 5 years	Planning	TBD by discussions with dam owners and emergency response agencies	Improved dam maintenance and emergency response capabilities	HHPD, HMGP, BRIC, PDM	High	SIP, LPR	SP



## SECTION 9.2. Town of Bolton

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Bolton-017	Stormwater Engineering Reviews	4	Flood, Severe Storm	<p>for development of the outreach plan.</p> <p><b>Problem:</b> There is a history of private roadway flooding caused by stormwater inadequacies.</p> <p><b>Solution:</b> The Town will require engineering review of stormwater projects for private roads and other stormwater related efforts for all Planning Board projects.</p>	No	None	1 year	Planning Board, Administration	Staff time	Improved review of stormwater projects, less stormwater flooding	Town budget	High	LPR	PR, SP
2023-Town of Bolton-018	Public Outreach and Awareness Program	1, 2,	Infestation, Disease Outbreak	<p><b>Problem:</b> The Town needs to increase public outreach and awareness of hazard reduction and public health measures.</p> <p><b>Solution:</b> The Town will provide community and public outreach for residents to include, but not be limited to, the following to promote and effect hazard risk reduction: -Provide and maintain links to the</p>	No	No	2 years	Planning, Public Health	Staff time	Increased public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				town's webpage to provide information on any infestation concerns and strategies. -Provide and maintain links to the town's webpage to provide information on any disease outbreak concerns along with public health information and mitigation strategies.										

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

**Acronyms and Abbreviations:**

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

**Potential FEMA HMA Funding Sources:**

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

**Timeline:**

The time required for completion of the project upon implementation.


**Cost:**

The estimated cost for implementation.

**Benefits:**

A description of the estimated benefits, either quantitative and/or qualitative.

**Critical Facility:**

Yes  Critical Facility located in 1% floodplain

**Mitigation Category:**

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



- **Structure and Infrastructure Project (SIP)**—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- **Natural Systems Protection (NSP)**—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- **Education and Awareness Programs (EAP)**—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

### *CRS Category:*

- *Preventative Measures (PR)*—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)*—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)*—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)*—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.2-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Bolton-001	Hamlet of Bolton Stormwater Drainage System Plan	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-002	Edgecomb Pond Dam Auxiliary Spillway Development Project	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-003	Edgecomb Pond Dam Upgrades	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-004	Generators for Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	0	11	High
2023-Town of Bolton-005	Wildland Fire Suppression Training	1	1	1	1	1	1	1	1	1	1	0	0	1	0	11	High
2023-Town of Bolton-006	Flood Education and Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2023-Town of Bolton-007	Red Alert Notification System Coverage Mapping	1	0	1	1	1	1	1	1	1	1	1	0	1	0	11	High
2023-Town of Bolton-008	Beaver Dam Strategies	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2023-Town of Bolton-009	Culvert Replacement and Upsizing	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Bolton-010	Flood Damage Prevention Ordinance Update	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Bolton-011	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	0	11	High
2023-Town of Bolton-012	Middleton Bridge Replacement	1	1	1	1	1	1	0	1	1	1	1	0	1	0	11	High
2023-Town of Bolton-013	Main Pump Station on Shore of Lake George	1	1	1	1	1	1	0	1	1	1	1	0	1	0	11	High
2023-Town of Bolton-014	Fire District Capability Improvements	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-015	Water Infrastructure and Availability	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-016	Dam Failure Capability Improvements	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Bolton-017	Stormwater Engineering Reviews	0	1	1	1	1	1	1	1	1	1	1	1	1	0	12	High
2023-Town of Bolton-018	Public Outreach and Awareness Program	1	0	1	1	1	0	1	0	1	1	1	1	0	0	9	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).





### 9.2.8 Action Worksheets

The following action worksheets were developed by the Town of Bolton to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Culvert Replacement and Upsizing		
<b>Project Number:</b>	2023-Town of Bolton-009		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The Town Highway Department has identified numerous culverts in need of upsizing. Culverts have previously been damaged due to deficiencies.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The following culverts will be replaced and upsized:</p> <ul style="list-style-type: none"> <li>• 8 culverts on Wall Street</li> <li>• 12 culverts on E. Schroon River Rd</li> <li>• 8 culverts on S. Trout Lake Rd</li> <li>• 5 culverts on Upper/ Lower Brerton with catch basins</li> <li>• 7 culverts on Finkle Rd.</li> <li>• 8 culverts on Mohican Rd, 3 with catch basins</li> </ul> <p>Other locations will be identified as necessary. Coordination will take place with the County where necessary due to ownership.</p>		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	At least a 5-year event; will be determined once project is complete	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, flood damages to culverts and roadways
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	Bridge NY, HMGP, BRIC, PDM, CHIPS, Town budget
<b>Responsible Organization:</b>	Town Highway Department, Warren County	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
	Action	Estimated Cost	Evaluation
<b>Alternatives:</b>	No Action	\$0	Current problem continues
	Remove roads	\$20,000	Roadways cannot be removed
	Relocate roads to another location	\$50,000	Roadways will still need to cross streams, costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
Project Name:	Culvert Replacement and Upsizing	
Project Number:	2023-Town of Bolton-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadways from flooding, culvert damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Town Highway Department, Warren County
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.3 TOWN OF CHESTER

This section presents the jurisdictional annex for the Town of Chester that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Chester's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.3.1 Hazard Mitigation Planning Team

The Town of Chester identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including Planning and Zoning, and the Supervisors office. The Zoning Administrator, and Deputy Supervisor represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.3-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Craig Leggett, Supervisor Address: P.O. Box 423, Chestertown, New York 12817 Phone Number: 518-494-2711 Email: <a href="mailto:supervisor@townofchesterny.org">supervisor@townofchesterny.org</a>	Name/Title: Larry Turcotte, Councilman Address: P.O. Box 423, Chestertown, New York 12817 Phone Number: 518-321-6544 Email: <a href="mailto:townofchesterboardmember@gmail.com">townofchesterboardmember@gmail.com</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: Jeremy Little – Zoning Administrator Address: P.O. Box 423, Chestertown, New York 12817 Phone Number: 518-494-7369 Email: <a href="mailto:zoning@townofchesterny.org">zoning@townofchesterny.org</a>	
<b>Additional Contributors</b>	
Name/Title: Marion Eagan, Deputy Supervisor Method of Participation: provided information on previous events, status updates on previous mitigation actions.	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Jeremy Little, Zoning Administrator Method of Participation: Provided permit information, NFIP administration information	
Name/Title: Jessica Leerkes, Office Assistant Method of Participation: Provided input on hazard rankings, reviewed annex, contributed to mitigation strategy	
Name/Title: Craig Leggett, Supervisor Method of Participation: Reviewed annex, contributed to mitigation strategy	

### 9.3.2 Municipal Profile

The Town of Chester is in northern Warren County, between the Schroon River and the Hudson River in the southeastern corner of the Adirondack Park. The New York legislature created the Town on March 25, 1799.

The Town has a total area of 87.1 square miles of which 84.5 square miles are land and 2.6 square miles are water. The Town is situated in the Adirondack Park, and the northern town line is the border of Essex County. The Town incorporates five hamlets: Chestertown, Darrowsville, Igerna, Pottersville, and Riparius.

According to the U.S. Census, the 2020 population for the Town of Chester was 3,086, an 8.0 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 1.7 percent of the population is 5 years of age or younger and 24.2 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Chester has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 7.63% of the population does not have a high school diploma
- 13.35% of the population has a disability
- 0.80% of households do not have a vehicle
- 8.24% of the population is living below the poverty level
- 5.54% of the population is unemployed

### 9.3.3 Jurisdictional Capability Assessment and Integration

The Town of Chester performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.



- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Chester to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Chester. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.3-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Code	State and Local	Warren County Fire Prevention and Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Chester adopted the New York State Uniform Code which guides how new development takes place and what protections are put in place. The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Zoning Local Law – 2005	Local, Adirondack Park	Town Board, Adirondack Park Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Local Law is to promote the health, safety, and general welfare of the community. The further objective is to protect property values, common values, the environment, and the aesthetics of the community				
<b>Subdivision Ordinance</b>	Yes	Subdivision Regulations – 2012	Local, Adirondack Park Agency (APA)	Town Board, APA
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Subdivision Ordinance establishes the regulations for the orderly, efficient and economical development of the Town. Land to be subdivided will be of character that it can be used safely for building purposes without danger to health, or peril from fire, flood or other menace; that proper provision will be made for drainage, water supply, sewerage and other needed improvements; that all proposed lots shall be so laid out and of such size as to be in harmony with the development pattern of the neighboring properties				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Site Plan Ordinance</b>	Yes	Zoning Local Law – Article 5 – Site Plan Review	Local	Planning and Zoning, Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Ordinance is to allow the proper integration of commercial and industrial uses and other uses into the community. The Ordinance objective is to evaluate proposed land uses that may cause conflict between existing and proposed uses or be in conflict with natural site conditions, with particular reference to the arrangement, layout and design of the proposed uses of a single parcel of land.				
<b>Stormwater Management Ordinance</b>	No	-	-	-
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	-	-	-
<b>Flood Damage Prevention Ordinance</b>	Yes	Local Law for Flood Damage Prevention – 2020	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this local law to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ol style="list-style-type: none"><li>1. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities</li><li>2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li><li>3. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters</li><li>4. Control filling, grading, dredging and other development which may increase erosion or flood damages</li><li>5. Regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands</li><li>6. Qualify and maintain for participation in the National Flood Insurance Program.</li></ol> The Local Law requires two feet of freeboard for all construction.				
<b>Wellhead Protection</b>	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	Yes	Section 7.01 Shoreline Regulations	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of these regulations is to allow reasonable access and use of the Town's waterfront with concern for the public health, welfare and safety. It is the Town's intent to minimize the impact to the shoreline environment and its natural character. These regulations are in addition to other applicable federal, state, and local regulations.  1. All construction on any shoreline lot shall be carried out in such a manner as to minimize interference with the natural course of such waterway, to avoid erosion of the shoreline, to minimize increased runoff of ground and surface water into the waterway, to remove only that vegetation which is necessary to the accomplishment of the project, and to generally maintain the existing aesthetic and ecological character of the shoreline. 2. Any marina, boat service facility or any storage of petroleum products within one hundred (100) feet, or other reasonable setback from the shoreline, as determined necessary by the Planning Board, shall include adequate provisions for insuring that any leak, rupture, or spill will be contained and not be introduced into or affect the adjacent waterway. 3. Any paved or otherwise improved parking, loading or service area within one hundred (100) feet of any shoreline shall be designed and constructed so as to minimize surface runoff and the entrance of any chemical pollutants or earthen siltation into the waterway. 4. If the minimum lot areas, widths and shore frontages specified for any uses by local and state agencies are inadequate to insure a potable water supply and safe sewerage and other waste disposal, such lot areas, widths and frontages shall be increased to meet water supply and distribution and sewerage needs. 5. Except as otherwise herein provided, the minimum shoreline setback of any on-site sewage drainage field or seepage pit shall be one hundred (100) feet from the shoreline, irrespective of the zoning district or land use classification. 6. There shall be no grading within ten (10) feet from the top of the slope of any stream bed or drainage way.				
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Master Plan of the Town of Chester, 2002	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town Comprehensive Plan monitors the increasingly intense development pressure, while fostering growth and maintaining the rural characteristics of the Town.				
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	No	-	-	-
<b>Stormwater Management Plan</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	Yes	Cunningham Community Forest Master Plan 2021	Local	Town Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Cunningham Community Forest Master Plan project was developed as a recommendation of the Chestertown Hamlet Plan and funded through a 2019 grant from NYSDEC's Adirondack Smart Growth Program with the goal of developing a plan to manage the site for forestry and recreation. The project has been developed in two parts – a Forest Management Plan and a Site Master Plan.</p>				
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	Local, County	Town Board, Warren County
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Consider the following:</p> <ul style="list-style-type: none"> <li>Does your CEMP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards?</li> </ul>				
<b>Continuity of Operations Plan</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Public Health Plan	No	-	-	-
Other	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Chester to oversee and track development.

**Table 9.3-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	The Planning and Zoning Office issues Zoning permits
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	For any development in the SFHA subject to the Town Flood Damage Prevention Local Law requirements, a FDP is issued.
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	Approximately 78% of the Town is built-out.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Chester and their current responsibilities that contribute to hazard mitigation.


**Table 9.3-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board reviews and approves all site plans, minor and major subdivisions
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals consists of five members and reviews and approves all variance applications
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway Department responsibilities include: Plowing, Paving, Tree Trimming, Road repair, culvert installation, stormwater maintenance.
Construction/Building/Code Enforcement Department	Yes	Warren County Building Codes
Emergency Management/Public Safety Department	Yes	Warren County Office of Emergency Services
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	Fire Company and EMS Squad
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning and Zoning, Warren County Planning Office, Town Consulting Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineer
Planners or engineers with an understanding of natural hazards	Yes	Town Engineer
Staff with expertise or training in benefit/cost analysis	No	Consultant Support
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Assessor and Zoning Office, Warren County Office of Emergency Services and Warren County Planning Department



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Town Supervisor
Grant writer(s)	Yes	Town Supervisor
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

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

**Table 9.3-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Chester.

**Table 9.3-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	Jack Bartlett
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-



Outreach Resources	Available? (Yes/No)	Comment:
Natural disaster/safety programs in place for schools	Yes	School districts in the Town include North Warren, Johnsburg, and Minerva.
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	-

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Chester.

**Table 9.3-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable  
- Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.3-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong



Hazard	Adaptive Capacity – Strong/Moderate/Weak
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.3.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

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

The following table summarizes the NFIP statistics for the Town of Chester.

**Table 9.3-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Chester	14	13	\$90,426	0	1	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

#### Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Chester.

**Table 9.3-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	Areas along the Hudson and Schroon Rivers are most prone to flooding. Additional flood zones are located along Loon Lake, Friends Lake, and Schroon Lake. No list of properties is maintained.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	N/A
Are any RiskMAP projects currently underway in your jurisdiction?	No





NFIP Topic	Comments
<ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	
<p>How do you make Substantial Damage determinations?</p> <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	<p>Damages are reviewed and a damage worksheet is completed. If the damages are greater than 50% of the market value prior to the damage, it is classified as Substantial Damage.</p> <p>No declarations were made for recent flood events.</p>
<p>How many properties have been mitigated (elevation or acquisition) in your jurisdiction?</p> <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	None
<p>Do your flood hazard maps adequately address the flood risk within your jurisdiction?</p> <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No, FIRM Panels haven't been updated since 1985 for the Town of Chester.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Planning and Zoning Department
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
<p>Does your floodplain management staff need any assistance or training to support its floodplain management program?</p> <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	Yes, training related to development in SFHA would be helpful for the staff to support the floodplain management program.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Determined based on the cost of the improvement. Substantial Improvement worksheet is completed and if the improvement cost is greater than 50% of the market value of the structure, it is classified as a substantial improvement.
What are the barriers to running an effective NFIP program in the community, if any?	Unknown
<p>Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?</p> <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAV – December 2, 2019
<p>What is the local law number or municipal code of your flood damage prevention ordinance?</p> <ul style="list-style-type: none"> <li>What is the date that your flood damage prevention ordinance was last amended?</li> </ul>	Local Law 1 of 2020 (adopted February 11, 2020)
Does your floodplain management program meet or exceed minimum requirements?	Meets requirements



NFIP Topic	Comments
<ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>	
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	None
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

### 9.3.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.3-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.3-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	14	0	15	0	20	0	11	1	17	4	14	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	1	0	2	0	0
Total New Construction Permits Issued	14	0	15	0	20	0	11	2	17	6	14	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated												

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.3.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools)



and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Chester's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Chester has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.

DRAFT



Figure 9.3-1. Town of Chester Flood Hazard Area Extent and Location Map

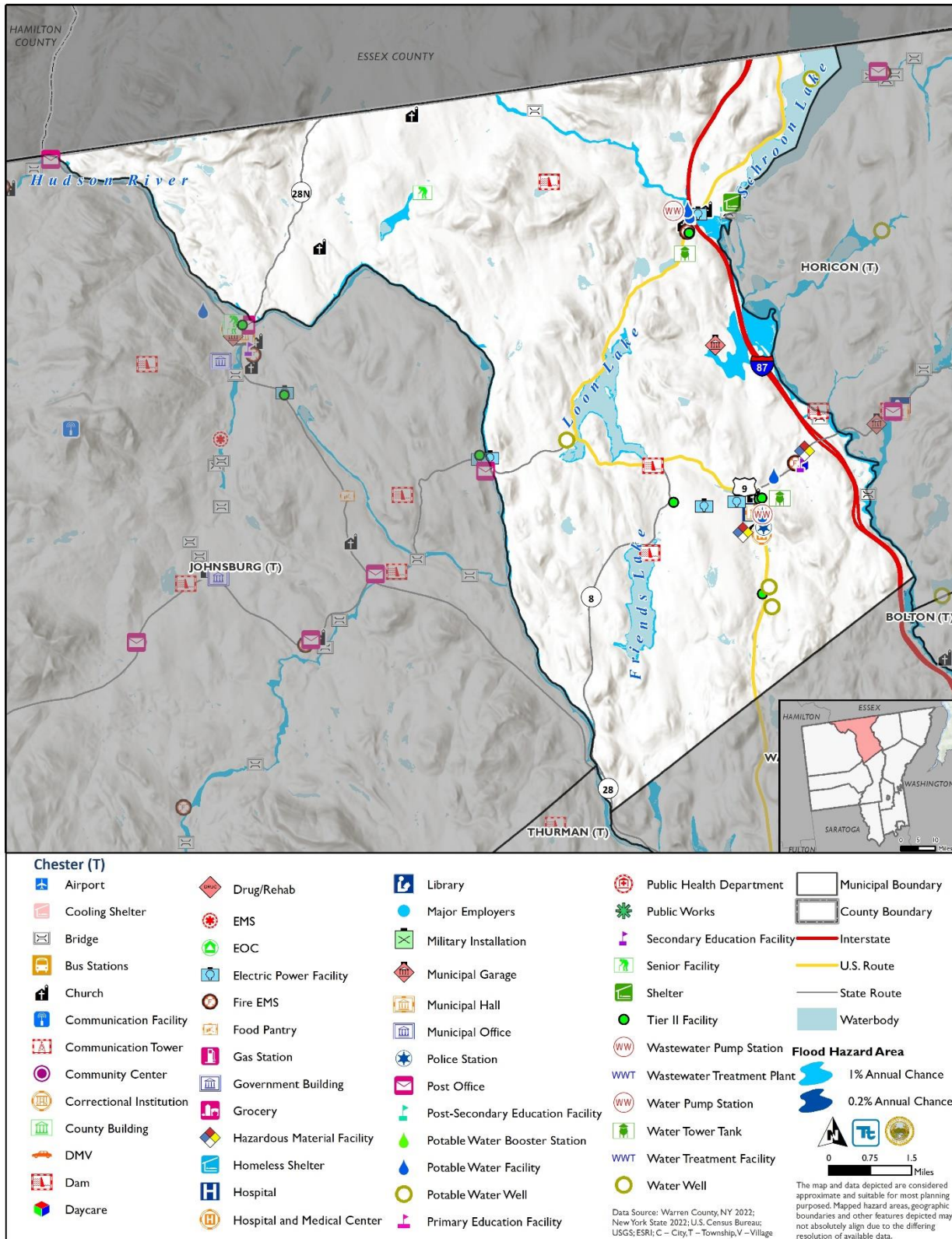






Figure 9.3-2. Town of Chester Earthquake (Soil Class) Hazard Area Extent and Location Map

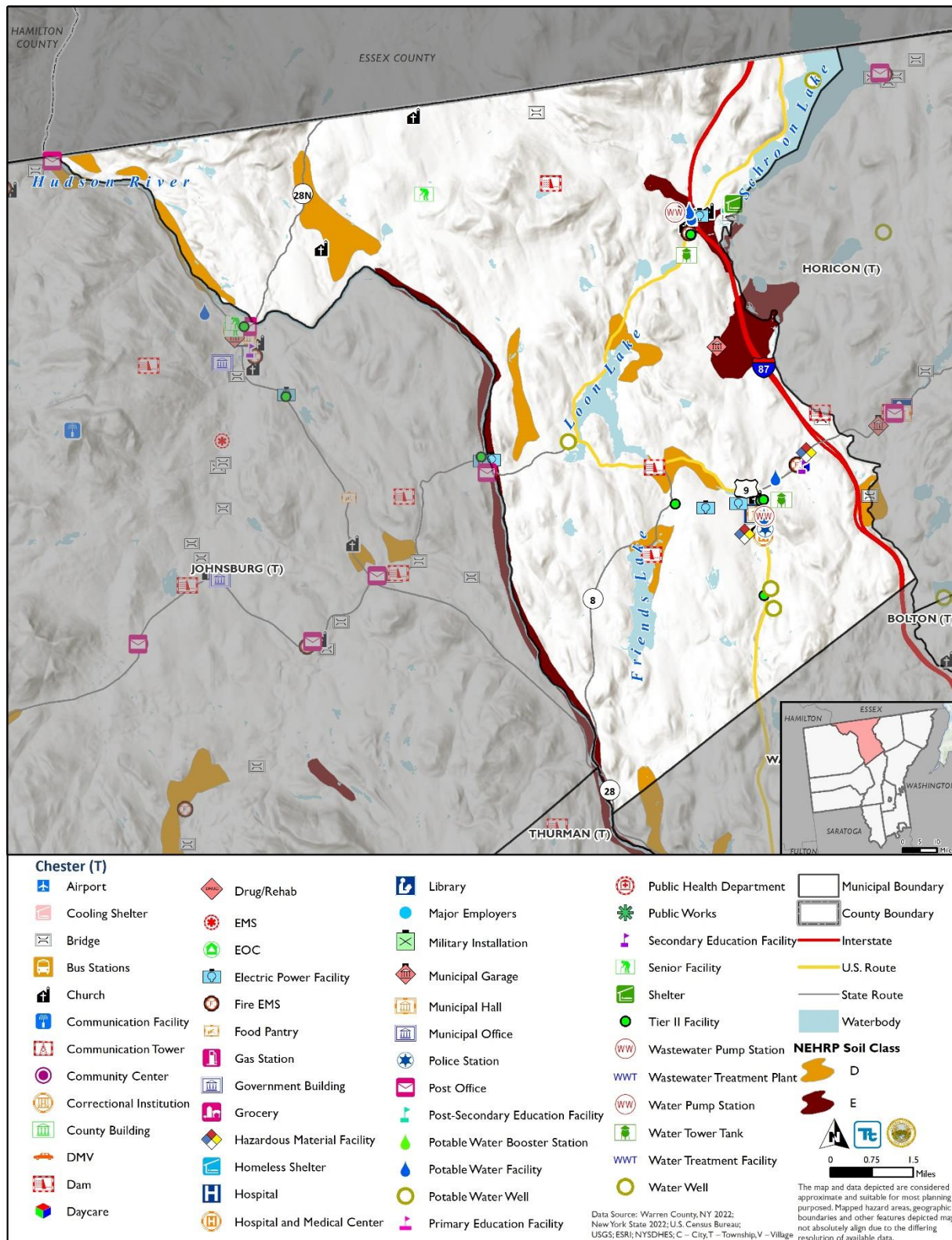
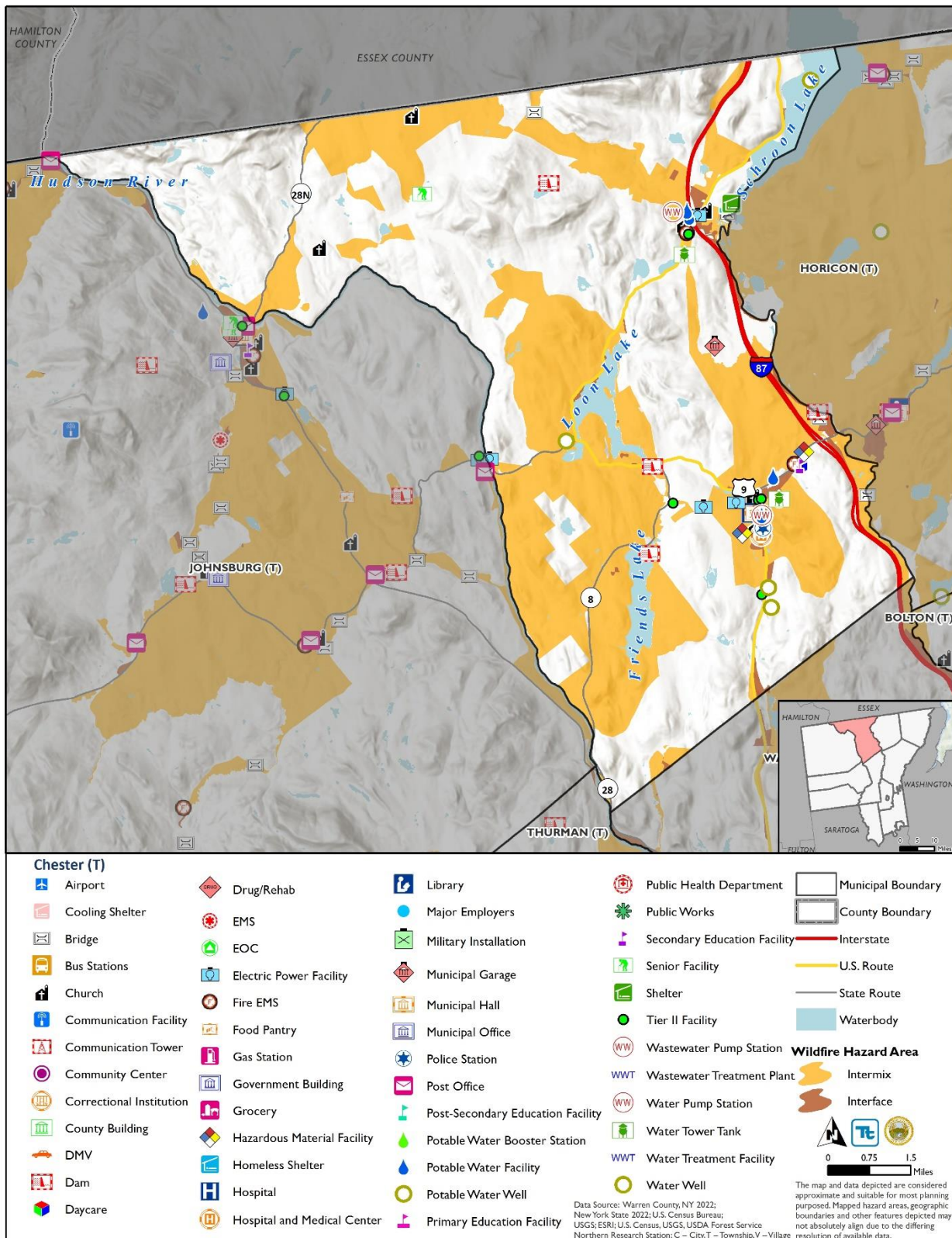




Figure 9.3-3 Town of Chester Earthquake (Soil Class) Hazard Area Extent and Location Map







## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume 1, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Chester's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.3-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.3-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31, 2019	Thunderstorms and flooding (DR-4472)	Yes	Heavy rain and strong winds throughout the County caused significant flooding and widespread power outages. FEMA validated damages in excess of \$3 million.	Town-wide power outage. Numerous roads flooded, closed, and damaged. Chestertown water district pump house flooded and the electrical system was damaged.
March 21, 2022	Beaver Dam Breach	No	Beaver Dam Breach that flooded/washed out roadways.	Flooding and damage to Hidden Lake Road and Olmsteadville Road.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Chester's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.





As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Chester. The Town of Chester reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town changed the hazard ranking for flood from low to medium, noting flooding issues from undersized culverts and concerns with flooding from beaver dams.
- The Town changed the hazard ranking for wildfire from low to medium, noting the severity of recent summertime droughts make wildfire more likely.
- The Town agreed with the remainder of the calculated hazard rankings.

**Table 9.3-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Medium	High	High	Medium	Medium

Dam Failure	Disease Outbreak
High	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.3-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Friends Lake Dam	Dam	X	X	–	Maintained by Friends Lake Property Owners Association
Loon Lake Dam	Dam	X	X	2023–Town of Chester–004	–
Valentine Chester	Bridge	X	X		Designed to withstand flood events. 30' deep piers.
Alder Brook	Bridge	X	X		Designed to withstand flood events. 30' deep piers.
Pottersville Water Plant	Potable Water Facility	X	X	2023–Town of Chester–016	–
Olmstedville Wells	Potable Water Facility	X	X	2023–Town of Chester–016	–

Source: Warren County 2022

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in or could impact the Town of Chester:

- Loon Lake Dam

### Identified Issues

After review of the Town of Chester's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Chester identified the following vulnerabilities within their community:

- Old River Road is floodprone along the Hudson River and has a past history of damages. There is no ingress or egress beyond the point of flooding.
- Town Hall Emergency Shelter, Hudson Headwaters, and North Warren Emergency Squad Headquarters (located in Chester, serves Chester and Horicon) lack backup power. When power is lost, the critical services they provide are also lost.
- The Town lacks a defined public outreach and awareness program or office.\*
- Loon Lake Dam is a high hazard dam. Failure of the dam would also impact State Highway Route 8/9. Rehabilitation of the dam is needed to protect from dam failure. An engineering study of the dam has been completed.
- Continual beaver dam breaches result in flooding and damage to local roads and culverts. Several roads including Stock Farm Rd, Igerna Rd, and Perry Rd have beaver dams, which if breached would cause severe flooding and damage to roads and properties.



- The Town Master Plan of the Town of Chester, 2002, requires update.
- Additional flood education is needed for residents.\*
- The Loon Lake EAP is outdated and requires updates for contacts and contact information.
- The Town is not a member of the StormReady program.
- The Town of Chester would like to strengthen zoning requirement to protect new development from hazards.
- Stock Farm Road and Perry Road have undersized culverts that contribute to flooding and may result in damages.
- The Town has limited adaptive capacity for earthquake, extreme temperature, flood, wildfire, infestation, dam failure and disease outbreak.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has 1 repetitive loss property, but other properties may be impacted by flooding as well. Areas along the Hudson and Schroon Rivers are most prone to flooding.\*
- Severe windstorms and snowstorms can result in falling trees that damage power lines and cause outages.
- The Pottersville Water Plant and Olmstedville Wells are critical facilities located in the 1-percent floodplain at the same location. It is unknown if the facilities are adequately protected for the 0.2-percent flood level.

\*This issue was identified as a specific area of concern based on resident response to the Warren County Hazard Mitigation Citizen survey.

### 9.3.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



**Table 9.3-15. Status of Previous Mitigation Action**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps 1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
TCH-1	Align the highway budget with mitigation actions identified in the hazard mitigation plan.			Town Board, Highway Department, Planning Department	In Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
						Damages Avoided; Evidence of Success		
TCH-2	Complete one mile of roadway elevation on Old River Road.			Town DPW, Planning Department	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TCH-3	Acquire funding and install backup generators at critical facilities, including Town Hall Emergency Shelter, Chestertown Hall, Hudson Headwaters, and North Warren Emergency Squad Headquarters (located in Chester, serves Chester and Horicon).			Town Board, Town Planning Department	In Progress	Cost		1. Include in 2023 HMP 2. Chestertown Hall can be removed. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
22TCH-4	Replace culverts and/or expand culvert capacity at Stock Farm Road and Wood Wells Road to meet 50-year storm requirements and reduce flooding overflow			Town Public Works / Highway	In Progress; Wood Wells Road Culver work has been completed	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TCH-5	Identify funding for Lake Loon dam rehabilitation and EAP.			Owned by Loon Lake Park District, managed by Town Board	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
TCH-6	Develop and implement a strategy to mitigate risk to public and property from beaver dam breaches			Planning Department, NYS DEC, Private property owners, Warren County Soil and Water Conservation District (SWCD)	In Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
TCH-7	Integrate the risk assessment and recommendations of the hazard mitigation plan with the comprehensive plan			Town Board, Planning Department	In Progress	Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. 3.
TCH-8	Purchase/acquire a tub grinder to support debris management after hazard event			Town Public Works/ Highway, Engineer, Local Utilities/ Developers	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability. Town hires a contractor as needed or utilizes County equipment to grind all debris at the Transfer Station.
TCH-9	Provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding. Information may include brochures, FEMA handouts, posters, pamphlets, note cards and online links			Town Board, County Office of Emergency Services	In Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
TCH-10	Educate specific homeowners who have property in the floodplain areas on carrying NFIP policies.			Town Floodplain Administrator	Ongoing Capability	Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. 3.
TCH-11	Work with Warren County to implement zoning regulations to discourage building new structures in disaster prone areas			Town Board, Planning Department	No Progress	Cost		1. Include in 2023 HMP 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)	Next Steps
TCH-12	Participate in the StormReady program			Town Board, Planning Department	In Progress	Cost Level of Protection Damaged Avoided; Evidence of Success	1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. 1. Include in 2023 HMP 2. 3.
TCH-13	Design a network of citizens that will check in on elderly, functional needs, and low- income individuals during major events.			Town Board, County Office of Emergency Services	Ongoing Capability	Cost Level of Protection Damaged Avoided; Evidence of Success	1. Discontinue 2. 3. Ongoing capability. This is completed in combination with the fire companies, under the direction of county and fire companies, includes individuals with oxygen needs.
TCH-14	Acquire funding to send a town representative to the 2017 NYS Wildland Fire Suppression Training			Local Fire Departments, County Office of Emergency Services	No Progress	Cost Level of Protection Damaged Avoided; Evidence of Success	1. Discontinue 2. 3. No longer a priority
TCH-15	Maintain a current inventory of at-risk buildings and infrastructure and continually update inventory of at-risk structures in each jurisdiction with annual review and revision			Zoning Administration Office	Ongoing Capability	Cost Level of Protection Damaged Avoided; Evidence of Success	1. Discontinue 2. 3. Ongoing capability
TCH-16	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections			Floodplain Administrator.	Complete	Cost Level of Protection Damaged Avoided; Evidence of Success	1. Discontinue 2. 3. Complete



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.3-15, the Town of Chester identified the following mitigation efforts completed since the last HMP:

- None identified

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Chester participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.3-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X	X	X	X	X	X	X	X	X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X	X	X	X	X	X	X		X
Wildfire	X	X		X	X	X	X			X
Infestation	X	X	X	X	X	X	X	X		X
Dam Failure	X	X		X	X	X	X		X	X
Disease Outbreak	X	X		X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.3-17).

The table below summarizes the specific mitigation initiatives the Town of Chester would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.





Table 9.3-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Chester-001	Elevate Old River Road	1	Flood	<b>Problem:</b> Old River Road is floodprone along the Hudson River and has a past history of damages. There is no ingress or egress beyond the point of flooding. <b>Solution:</b> The Town will elevate one mile of Old River Road.	No	None	Within 5 years	Town DPW, Planning Department	High	Reduction in flooding on Old River Road	HMGP, BRIC, PDM, Municipal Budget	High	SIP	PP
2023-Town of Chester-002	Critical Facilities Backup Power	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire	<b>Problem:</b> Town Hall Emergency Shelter, Hudson Headwaters, and North Warren Emergency Squad Headquarters (located in Chester, serves Chester and Horicon) lack backup power. When power is lost, the critical services they provide are also lost. <b>Solution:</b> The Town will purchase and install backup power and necessary electrical components at critical facilities. The Highway Department will be responsible for maintenance. The Town Municipal Center will require a 150kW generator. The generators will provide continuous power for services to ensure the health and safety of residents,	Yes	None	Within 5 years	Town Board, Town Planning Department	High, costs for Town Municipal Center is approximately \$78,000	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				businesses and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen issues. Services such as heat and cooling will be uninterrupted to support the needs of vulnerable populations, community alerts and rapid inspections and monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities.										
2023-Town of Chester-003	Public Outreach and Awareness Program	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation,	<b>Problem:</b> The Town lacks a defined public outreach and awareness program or office. <b>Solution:</b> The Town will include hazard mitigation information on the municipal website and develop programs/plans inform citizens on natural hazards, risk, and ways to protect themselves during such events. Solution: The Town will undertake the following outreach initiatives:-Educate	No	None	2 years	Administration	Low	Increased public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Disease Outbreak	residents regarding steps to be taken to decrease the impact of natural hazards (including dam failure, disease outbreak, earthquake, extreme temperature, drought, flood, infestation, severe storm, severe winter storm, and wildfire ) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities. -Provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding. -Educate the community on benefits of carrying NFIP policies and increase knowledge of NFIP services.										
2023-Town of Chester-004	Loon Lake Dam Rehabilitation	1, 6	Dam Failure	<b>Problem:</b> Loon Lake Dam is a high hazard dam. Failure of the dam would also impact State Highway Route 8/9. Rehabilitation of the dam is needed to protect from dam failure. An engineering study of the dam has been completed.	Yes	May require permitting	Within 5 years	Loon Lake Park District, managed by Town Board	High	Dam failure risk reduced	HHPD, HMGP, BRIC, PDM, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will implement the actions identified in the engineering study, including anchoring of the dam and spillway and repair of the grouting and facing, and new concrete for the spillway apron and sidewalls. All repairs will be made to withstand 500-year flood event specifications.										
2023-Town of Chester-005	Beaver Dam Strategies	5	Flood, Infestation and Invasive Species	<p><b>Problem:</b> Continual beaver dam breaches result in flooding and damage to local roads and culverts. Several roads including Stock Farm Rd, Igerna Rd, and Perry Rd have beaver dams, which if breached would cause severe flooding and damage to roads and properties.</p> <p><b>Solution:</b> The Town will investigate and install methods to reduce the impact of potential beaver dam breach. . The investigation will include a flood study to evaluate the impacts of beaver dam breaches and potential solutions. Solutions could include intake pipes, fencing, excessive vegetation removal</p>	No	Yes, some solutions may not be available due to beaver restrictions	Within 5 years	Planning Department, NYS DEC, Private property owners, Warren County Soil and Water Conservation District (SWCD)	TBD by identified strategies	Reduction in beaver dam failure flood events	Town budget	High	NSP	NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Chester-006	Master Plan Update	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<p>or other appropriate measures.</p> <p><b>Problem:</b> The Town Master Plan of the Town of Chester, 2002, requires update.</p> <p><b>Solution:</b> The Town will update the Master Plan, integrating aspects of hazard mitigation where applicable. The Master Plan will support risk reduction and evaluate land use, health and safety, and environmental quality to support a more resilient future for the Town.</p>	No	None	Within 5 years	Town Board, Planning Department	Low	Integration of hazard mitigation	Town budget	High	LP R	PR
2023-Town of Chester-007	Flood Education and Outreach	2	Flood	<p><b>Problem:</b> Additional flood education is needed for residents.</p> <p><b>Solution:</b> The Town will provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding. Information may include brochures, FEMA handouts, posters, pamphlets, note cards and online links. The Town will educate specific homeowners who have property in the</p>	No	None	2 years	Town Board, County Office of Emergency Services	Low	Increased flood awareness	Town and County budgets	High	EA P	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				floodplain areas on carrying NFIP policies.										
2023-Town of Chester-008	Loon Lake Dam EAP	6	Flood	<b>Problem:</b> The Loon Lake EAP is outdated and requires updates for contacts and contact information. <b>Solution:</b> The Town will update the EAP and ensure it is maintained annually.	Yes	None	Within 6 months	Loon Lake Park District, managed by Town Board	Staff time	EAP kept up to date, improved emergency response capabilities	BRIC, PDM, Loon Lake Park District, Town budget	High	LP R	ES
2023-Town of Chester-009	StormReady Program	3	Severe Storm, Severe Winter Storm	<b>Problem:</b> The Town is not a member of the StormReady program. <b>Solution:</b> The Town will complete the necessary pre-requisites and join the StormReady program.	Yes	None	Within 5 years	Town Board, Planning Department	Medium	Increased storm threat identification and warning, increased preparedness	Emergency Management Performance Grants (EMPG) Program, Town budget	High	LP R, EAP	PI, ES
2023-Town of Chester-010	Zoning Regulations	4, 5	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Town of Chester would like to strengthen zoning requirement to protect new development from hazards. <b>Solution:</b> The Town will work with Warren County to implement zoning regulations to discourage building new structures in disaster prone areas to address earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazards.	No	None	Within 5 years	Town Planning Board, Warren County	Staff time	Reduction in hazard prone development	County and Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Chester-011	Upsizing Culverts	1	Flood, Severe Storm	<b>Problem:</b> Stock Farm Road and Perry Road have undersized culverts that contribute to flooding and may result in damages. <b>Solution:</b> The Town will replace the undersized culverts, increasing culvert sizing to meet 50-year storm requirement.	No	None anticipated	Within 5 years	Highway Department	High	Reduced flooding and flood damages	CHIPS, BRIC, PDM, HMGP, Town budget	High	SIP	SP
2023-Town of Chester-012	Increased Adaptive Capacity	3, 4	Earthquake, Extreme Temperature, Flood, Wildfire, Infestation, Dam Failure, Disease Outbreak.	<b>Problem:</b> The Town has limited adaptive capacity for earthquake, extreme temperature, flood, wildfire, infestation, dam failure and disease outbreak. <b>Solution:</b> The Town will utilize shared services, intermunicipal resources (including equipment) and other agencies for help in addressing hazards. An addendum to the local emergency plan will be developed that includes a list of intermunicipal resources and agencies with contact information.	No	None	Within 5 years	Administration	Staff time	Increased adaptive capacity	Town budget	High	LP R	PR, ES
2023-Town of Chester-013	Substantial Damage Procedures	1, 3, 4	Earthquake, Flood, Severe Storm, Severe	<b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures,	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain	Municipal budget	High	LP R	PP, PR





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Winter Storm, Wildfire, Dam Failure	make determinations, and provide for appeals. <b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations for earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazards.						administration				
2023-Town of Chester-014	Repetitive Loss Properties	1	Flood, Severe Storm	<b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has 1 repetitive loss property, but other properties may be impacted by flooding as well. Areas along the Hudson and Schroon Rivers are most prone to flooding. <b>Solution:</b> The Town will conduct outreach to 10 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, the Town will work with property-owners to	No	None	Within 5 years	FPA, homeowners	High	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).										
2023-Town of Chester-015	Hazardous Tree Identification	4, 5	Infestation and Invasive Species, Severe Storm, Severe Winter Storm	<p><b>Problem:</b> Severe windstorms and snowstorms can result in falling trees that damage power lines and cause outages.</p> <p><b>Solution:</b> The Town Highway Department will complete a survey of trees in the Town that are in danger of falling on power lines. In particular, the Highway Department will look to identify trees that have damage due to pests or disease. The results of this survey will be shared with utility companies to request hazardous trees be trimmed or removed.</p>	No	None	2 years	Highway Department	Low	Hazardous trees identified	Town budget	High	NSP	NR
2023-Town of Chester-016	Critical Facility Flood Protection	1	Flood	<p><b>Problem:</b> The Pottersville Water Plant and Olmstedville Wells are critical facilities located in the 1% floodplain at the same location. It is unknown if the facilities are adequately protected for the 0.2% flood level.</p>	Yes ●	None	Within 5 years	Engineer	TBD	Protection of critical facilities from flooding	HMGP, BRIC, PDM, Town budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Engineer will conduct an engineering study to determine flood exposure of the facilities. Cost-effective mitigation actions will be completed to protect the facilities, as necessary.										

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

**Acronyms and Abbreviations:**

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

**Potential FEMA HMA Funding Sources:**

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

**Timeline:**

The time required for completion of the project upon implementation.


**Cost:**

The estimated cost for implementation.

**Benefits:**

A description of the estimated benefits, either quantitative and/or qualitative.

**Critical Facility:**

Yes  Critical Facility located in 1% floodplain

**Mitigation Category:**

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**



- *Preventative Measures (PR)*—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)*—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)*—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)*—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.3-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Chester-001	Elevate Old River Road	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Chester-002	Critical Facilities Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	0	11	High
2023-Town of Chester-003	Public Outreach and Awareness Program	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2023-Town of Chester-004	Loon Lake Dam Rehabilitation	1	1	1	1	1	1	0	1	1	1	0	0	1	0	10	High
2023-Town of Chester-005	Beaver Dam Strategies	0	1	1	1	1	0	0	1	1	1	1	0	1	0	9	High
2023-Town of Chester-006	Master Plan Update	0	1	1	1	1	1	1	1	1	1	1	0	1	0	11	High
2023-Town of Chester-007	Flood Education and Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2023-Town of Chester-008	Loon Lake Dam EAP	1	1	1	1	1	1	1	1	1	1	0	0	1	0	11	High
2023-Town of Chester-009	StormReady Program	1	0	1	1	1	1	1	1	1	1	1	0	1	0	11	High
2023-Town of Chester-010	Zoning Regulations	1	1	1	1	1	1	1	1	1	1	1	0	1	0	12	High
2023-Town of Chester-011	Upsizing Culverts	1	1	1	1	1	0	0	1	1	1	1	0	1	0	10	High
2023-Town of Chester-012	Increased Adaptive Capacity	1	1	1	1	1	1	1	1	1	1	1	0	1	0	12	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Chester-013	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	0	11	High
2023-Town of Chester-014	Repetitive Loss Properties	1	1	1	1	0	1	0	1	1	1	1	0	1	0	10	High
2023-Town of Chester-015	Hazardous Tree Identification	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2023-Town of Chester-016	Critical Facility Flood Protection	1	1	1	0	1	1	0	1	1	1	0	0	1	1	10	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.3.8 Action Worksheets

The following action worksheets were developed by the Town of Chester to aid in the submittal of grant applications to support the funding of high priority proposed actions.





Action Worksheet			
<b>Project Name:</b>	Loon Lake Dam Rehabilitation		
<b>Project Number:</b>	2023-Town of Chester-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Dam Failure		
<b>Description of the Problem:</b>	Loon Lake Dam is a high hazard dam. Failure of the dam would also impact State Highway Route 8/9. Rehabilitation of the dam is needed to protect from dam failure. An engineering study of the dam has been completed.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will implement the actions identified in the engineering study, including anchoring of the dam and spillway and repair of the grouting and facing, and new concrete for the spillway apron and sidewalls. All repairs will be made to withstand 500-year flood event specifications.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	500-year flood	<b>Estimated Benefits (losses avoided):</b>	Dam failure avoided, meet safety requirements
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	1, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HHPD, HMGP, BRIC, PDM, Town budget
<b>Responsible Organization:</b>	Loon Lake Park District, managed by Town Board	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation Planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Build New Dam	Very High	Costly
	Remove Dam	High	Dam cannot be removed for safety reason.
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Loon Lake Dam Rehabilitation	
<b>Project Number:</b>	2023-Town of Chester-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project protects life from dam failure
Property Protection	1	Project protects property from dam failure
Cost-Effectiveness	1	
Technical	1	
Political	1	There is public support for the project
Legal	1	The Town has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Dam Failure
Timeline	0	Within 5 years
Agency Champion	1	Loon Lake Park District, managed by Town Board
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.4 CITY OF GLENS FALLS

This section presents the jurisdictional annex for the City of Glens Falls that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the City participated in the planning process, an assessment of the City of Glens Falls' risk and vulnerability, the different capabilities used in the City, and an action plan that will be implemented to achieve a more resilient community.

#### 9.4.1 Hazard Mitigation Planning Team

The City of Glens Falls identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many City departments, including the Water and Sewer Department and the Glens Falls Hospital. The Director of Emergency Management represented the community on the Warren County Hazard Mitigation Plan Planning Partnership, Steering Committee, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.4-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Justin Reckner, Code Enforcement Officer, Building & Codes Address: 42 Ridge Street, Glens Falls, NY 12801 Phone Number: 518-761-3848 Email: jreckner@cityofglensfalls.com	Name/Title: William Norton – Water and Sewer Superintendent Address: 42 Ridge Street, Glens Falls, NY 12801 Phone Number: 518-761-3820 Email: wnorton@cityofglensfalls.com
<b>NFIP Floodplain Administrator</b>	
Name/Title: Justin Reckner, Code Enforcement Officer, Building & Codes Address: 42 Ridge Street, Glens Falls, NY 12801 Phone Number: 518-761-3848 Email: jreckner@cityofglensfalls.com	
<b>Additional Contributors</b>	
Name/Title: Sheila Mender, Secretary to Water/Sewer Superintendent & City Engineer	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on capabilities	
Name/Title: Philip Cancelliere, Building Inspector	
Method of Participation: Provided building permit information	
Name/Title: William Norton, Water and Sewer Superintendent	
Method of Participation: Provided information on previous events, status update on previous actions	

### 9.4.2 Municipal Profile

The City of Glens Falls is located in the southeastern corner of Warren County in the Adirondack foothills. It is bordered by the Town of Queensbury to the north, east and west and the Hudson River and Saratoga County to the south. The City has a total land area of 3.9 square miles of which 3.8 square miles is land and 0.1 square miles is water. Interstate 87, U.S. Route 9, New York Route 32 and New York Route 9L are major transportation routes serving the City.

The City was incorporated in 1908 with a strong mayor charter. The City's Common Council has six members, five are elected from wards and one is elected at large.

The City owns a large amount of watershed land, protecting the City water supply, within the adjacent Town of Queensbury.

According to the U.S. Census, the 2020 population for the City of Glens Falls was 14,830, a 2.9 percent increase from the 2010 Census. Data from the 2020 U.S. Census indicate that 6.1 percent of the population is 5 years of age or younger and 14.4 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the City of Glens Falls has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 8.82% of the population does not have a high school diploma
- 17.46% of the population has a disability
- 15.25% of households do not have a vehicle
- 10.73% of the population is living below the poverty level
- 6.12% of the population is unemployed

### 9.4.3 Jurisdictional Capability Assessment and Integration

The City of Glens Falls performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.



- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the City of Glens Falls to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the City of Glens Falls. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.4-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Fire Prevention and Building Code; Chapter 109 Building Code Administration.	Local, State	Building and Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The City of Glens Falls adopted the New York State Uniform Fire Prevention and Building Code to require safe construction.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 220 – Zoning	Local	Building and Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this ordinance is to guide the future growth and development of the City in accordance with a well-considered plan of land use and population distribution that represents and promotes beneficial and convenient relationships among residential, commercial, industrial and public areas within the City, considering the suitability of each area for such uses, as indicated by existing conditions, trends in population and mode of living, and future needs for various types of land development. The Ordinance requires the use of adequate light, air and privacy, prevention of overcrowding of land and undue concentration of population, beneficial circulation of traffic throughout the City, safety and security from fire, flood and other dangers, protect and conserve the existing character of the City.				
<b>Subdivision Ordinance</b>	Yes	Chapter 192 – Subdivision of Land	Local	Planning Board, Building and Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance requires any subdivided areas of land to submit a preliminary plat application that show the land will have proper drainage, water, sewerage, and follow the zoning and land use of the City.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Site Plan Ordinance</b>	Yes	Chapter 220 – Article §220-27 – Site Plan Review and Approval	Local	Building and Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose and intent of the site plan review and approval is to accomplish the development, mixed-use character and limited area of the City. New developments will mitigate the impact on neighboring properties, traffic, resources and the general welfare of the City.				
<b>Stormwater Management Ordinance</b>	Yes	Chapter 220 – Zoning	Local	Water and Sewer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater Management Ordinance establishes a Stormwater Pollution Prevention Plan.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	–	–	–
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	–	–	–
<b>Environmental Protection Ordinance</b>	Yes	Chapter 204 – Trees	Local	Tree Commission
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Except upon the order of the Tree Commission, it shall be unlawful for any person, firm or corporation or the officer or employee of a corporation, without a permit from the Tree Commission, to remove, destroy, cut, break, climb or injure any tree, plant or shrub or portion thereof that is planted or growing in or upon any public highway or public place within the City of Glens Falls or cause, authorize or procure any person to remove, destroy, cut, break, climb or injure any such tree or shrub or portion thereof or to injure, misuse or remove or cause, authorize or procure any person to injure, misuse or remove any device set for the protection of any tree, plant or shrub in or upon any public highway.				
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 113 – Flood Damage Prevention, 1989	Local	Building and Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, are protected against flood damage at the time of initial construction</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li></ul>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands				
F. Qualify for and maintain participation in the National Flood Insurance Program.				
The chapter needs to be updated to include the state's two foot freeboard requirement.				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	-	-	-	-
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	No	-	-	-
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	No	-	-	-
<b>Stormwater Management Plan</b>	Yes	Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP)	Local	Water and Sewer; Common Council
How has or will this be integrated with the HMP and how does this reduce risk?				
Stormwater pollution prevention plan requirement. No application for approval of a land development activity shall be reviewed until the appropriate board has received a stormwater pollution prevention plan (SWPPP).				
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Transportation Plan	No	-	-	-
Agriculture Plan	No	-	-	-
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	No	-	-	-
Other (for example NYRCR, etc.)	Yes	2015–2019 City of Glen Falls Consolidated Plan; 2014 Community Development Action Plan	Local	
How has or will this be integrated with the HMP and how does this reduce risk?				
<b>Response/Recovery Planning</b>				
Comprehensive Emergency Management Plan	No	-	-	-
Continuity of Operations Plan	No	-	-	-
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Public Health Plan	No	-	-	-
Other	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the City of Glens Falls to oversee and track development.

**Table 9.4-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	Building & Codes/Planning
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	Most development within the City is re-development. There is limited opportunity for new development currently.

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the City of Glens Falls and their current responsibilities that contribute to hazard mitigation.

**Table 9.4-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board consists of eight members that have the power and authority to approve plats for subdivision within the City.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals is an eight-member board responsible for the review and approval of any permits, easements and land use changes.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Glens Falls Urban Renewal Agency
Public Works/Highway Department	Yes	The Department of Public Works is responsible for: <ul style="list-style-type: none"><li>Maintenance of all City-owned buildings and grounds</li><li>Maintenance of all City-owned parks, recreation facilities, and green areas within the street</li><li>Right of way work permit</li><li>Road maintenance</li><li>Sidewalk construction</li><li>Sign and street line painting</li><li>Snow and ice control</li></ul>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> <li>Snow dump permit (PDF)</li> <li>Street cleaning</li> <li>Street lighting</li> <li>Traffic control lights</li> <li>Yard waste collection</li> </ul>
Construction/Building/Code Enforcement Department	Yes	The Building and Codes Department is responsible for issuing building permits, conducting code inspections, and coordinating meetings of the Planning Board and Zoning Board of Appeals
Emergency Management/Public Safety Department	Yes	Fire and Police Departments
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	See Public Works/Highway Department
Mutual aid agreements	Yes	Fire and EMS
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	Yes	Code Enforcement Officer and City Engineer
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Water and Sewer GIS Technician
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-



## Fiscal Capability

The table below summarizes financial resources available to the City of Glens Falls.

**Table 9.4-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the City of Glens Falls.

**Table 9.4-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"><li>If yes, please describe.</li></ul>	No	-



## Community Classifications

The table below summarizes classifications for community programs available to the City of Glens Falls.

**Table 9.4-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	2/2016
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.4-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate



## 9.4.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the City of Glens Falls.

**Table 9.4-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
City of Glens Falls	12	0	\$0	0	0	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

### Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the City of Glens Falls.

**Table 9.4-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	Flooding takes place within the Special Flood Hazard Area along the Hudson River. The Town does not maintain a list of properties that have been damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	The City lacks official substantial damage procedures. No declarations have been made for recent flood events.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	None



NFIP Topic	Comments
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	N/A
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Building and Codes
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes, the City would like floodplain training for the Code Enforcement Officer.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The City performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the City, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the City. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Alteration level two or three
What are the barriers to running an effective NFIP program in the community, if any?	Low Flood Risk
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	N/A
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	22O-23
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets Federal and State requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Site Plan Review
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not participating





### 9.4.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.4-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.4-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	11	0	7	0	5	0	15	0	6	0	8	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	1	0
Other (commercial, mixed-use, etc.)	0	0	1	0	1	0	10	0	6	0	5	0
Total New Construction Permits Issued	11	0	8	0	6	0	25	0	12	0	14	0
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development					
Recent Major Development and Infrastructure from 2017 to Present												
None identified.												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None identified.												

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.4.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the City of Glens Falls's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the City of Glens Falls has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.



Figure 9.4-1. City of Glens Falls Flood Hazard Area Extent and Location Map

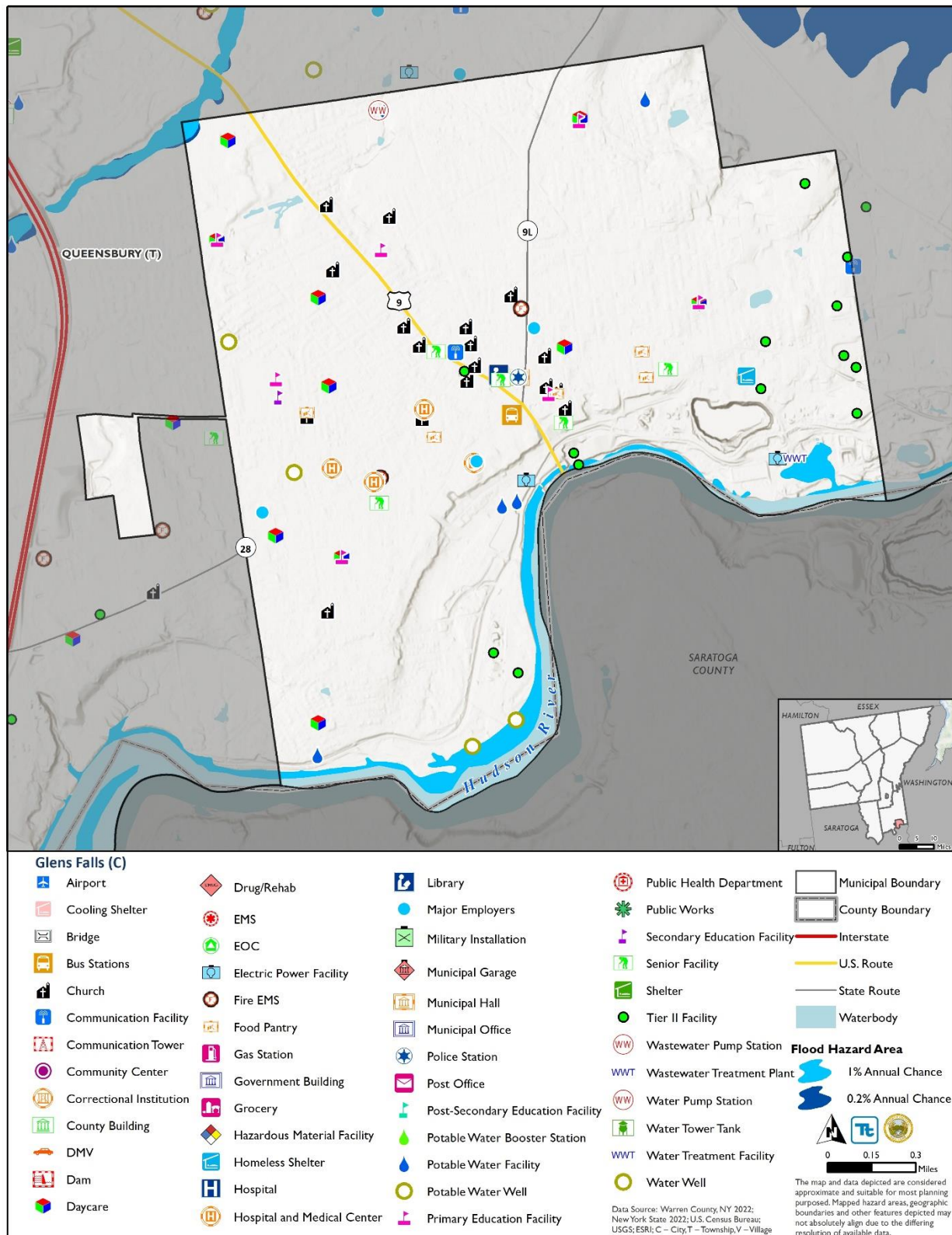




Figure 9.4-2. City of Glens Falls Earthquake (Soil Class) Hazard Area Extent and Location Map

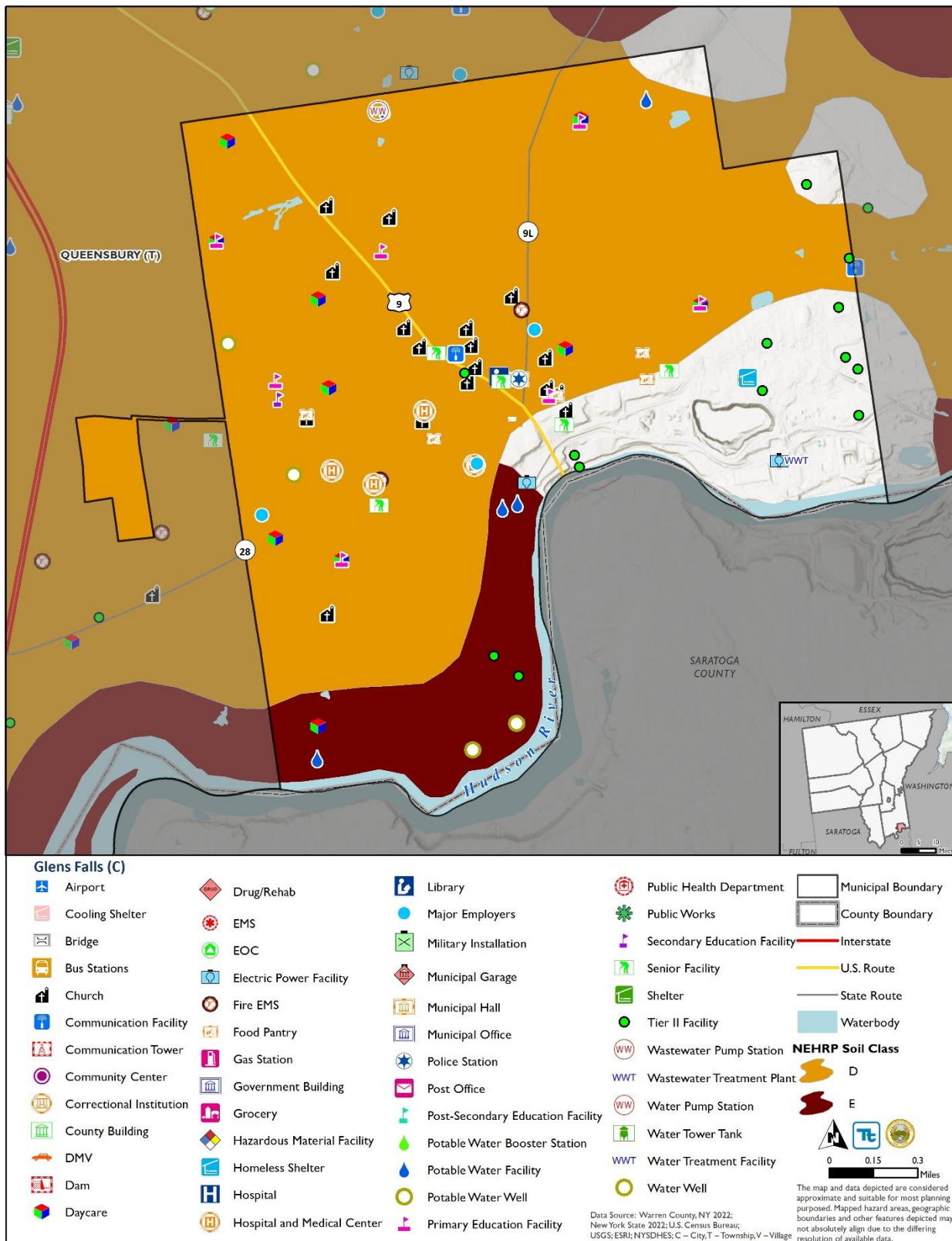
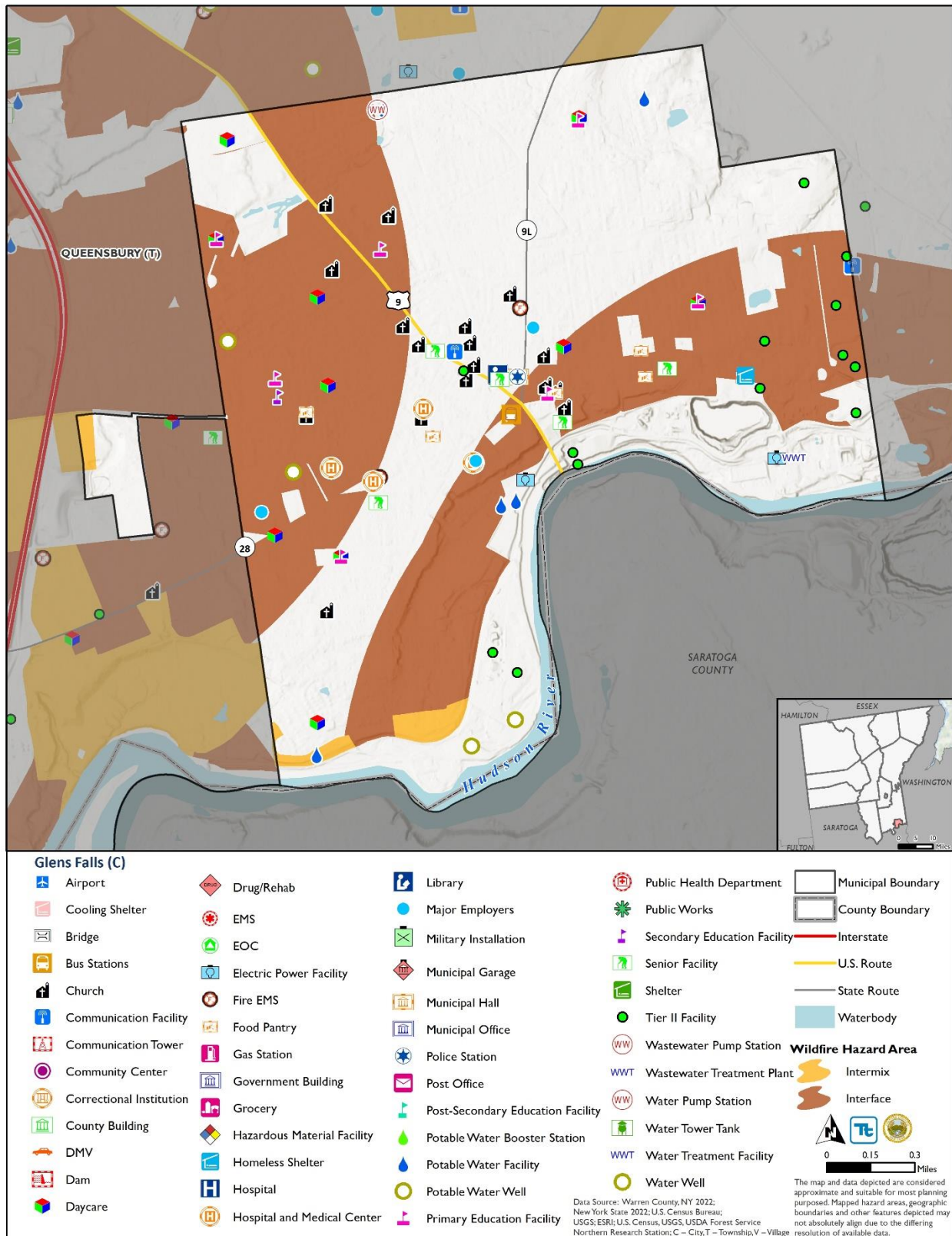






Figure 9.4-3. City of Glens Falls Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The City of Glens Falls' history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.4-12 provides details regarding municipal-specific loss and damages the City experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.4-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
July 1, 2017	Severe thunderstorms	N/A	Roads and property washed out.	Hillside at WWTP washed out, basement flooded.
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low-pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	Although the County was impacted, the City did not report significant damages.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19	The City was subject to closures and masking/social distancing requirements.

**Notes:**

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



## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the City of Glens Falls risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Glens Falls. The City of Glens Falls reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the City indicated the following:

- The City agreed with the calculated hazard rankings.

**Table 9.4-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Medium	Low	High	High	High	Medium

Dam Failure	Disease Outbreak
Medium	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance



flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.4-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Finch, Pruyn&Co Landfill#1 Evoqua Water Technologies	Tier II Facility	X	X	2023-City of Glens Falls-O11	-
Island Drive Water Well	Water Well	X	X	2023-City of Glens Falls-O11	-

Source: Warren County 2022

## Identified Issues

After review of the City of Glens Falls hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the City of Glens Falls identified the following vulnerabilities within their community:

- The City's fire water hydrant system has issues with low flow.
- Flooding is an ongoing issue in the Bush Street area, where residential building is currently ongoing.
- Hazard mitigation integration is needed in the Community Development program to guide safe development practices.
- Critical facilities require backup power to maintain essential functions during and after disaster events.
- Infill housing is being considered in Queensbury and some other dam failure inundation areas. This could increase risk, resulting in increased dam hazard ratings.
- Climate change will result in changes in the frequency and severity of hazard events, resulting in outdated development guidelines and maintenance practices.
- The City's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- The City's Floodplain Administrator requires additional training to increase capabilities.
- The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.





- Finch, Pruyn&Co Landfill#1 Evoqua Water Technologies is a Tier II facility located in the 1-percent floodplain. The facility is a privately owned critical facility.

### 9.4.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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**Table 9.4-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection Damages Avoided; Evidence of Success	
CGF-1	Water System Hydraulic Analysis: Perform a dynamic hydraulic analysis to address low flows in the City's fire water hydrant systems. The analysis would be completed in two parts – first create a model of the system, then identify and implement solutions.	Wildfire	Some hydrants may have insufficient pressure	Fire Department, Water and Sewer, DPW	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-2	Wilke Intake Spillway Improvements as specified by engineering assessment of the Wilke Intake Queensbury Dam.	Flood (Dam Failure)	Minor repairs and maintenance required	Water and Sewer Board, Common Council	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing Capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-3	Work with Finch Paper to: <ul style="list-style-type: none"> <li>Better understand when trains are moving and may block the single WWTP ingress/egress.</li> <li>Install an emergency gate in the fence.</li> </ul>	Severe Storm, Severe Winter Storm	Train blocks main road for short periods of time	DPW, Fire Department, Finch Paper	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-4	Evaluate causes of flooding and possible mitigation solutions in	Flood	Need to better control stormwater	DPW, Water and Sewer	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		



## SECTION 9.4. City of Glens Falls

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Damages Avoided; Evidence of Success	
	the Bush Street area, where residential building is currently ongoing.							1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CGF-5	Continue to incorporate green infrastructure design into development and redevelopment projects	Flood, Severe Storm, Severe Winter Storm	Need for more green infrastructure	DPW, Water and Sewer, Building and Codes	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-6	Integrate natural hazard mitigation strategies, such as property protection measures, into the Community Development program, as appropriate.	All Hazards		Community Development, Common council	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-7	Work with facility owners to install or upgrade permanent back-up power at the following critical facilities: •WWTP •All City district school •City Hall •Standby power for four or five lift/pumping stations •Library (supplement current partial backup power.) •The Pines (private nursing home) •Stichman Towers (senior living) – replace older backup power system	Severe Storm, Severe Winter Storm		DPW, Building and Codes	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
CGF-		Flood	Catch basins need to be	DPW, Water and Sewer	Ongoing Capability	Cost		1. Discontinue 2.
						Level of Protection		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Damages Avoided; Evidence of Success	
	Develop and implement a catch basin cleaning program.		cleaned regularly					1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CGF-9	Improve public education/understanding of the dam failure inundation zones (specifically in Queensbury), where they are looking to do some infill housing (increases risk – and could increase dam hazard ratings).	Flood		DPW, Community Development, Building and Codes	No Progress	Cost		3. Ongoing Capability
						Level of Protection		
						Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. 3.
CGF10	Develop and implement a street tree maintenance program.	Severe Storm, Severe Winter Storm	Trees must be evaluated and kept trimmed	DPW	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
CGF-11	Develop guidelines and standards for incorporating likely impacts of climate change into design and maintenance programs.	All Hazards		DPW, Community Development, Building and Codes, Common Council	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3.



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.4-15, the City of Glens Falls identified the following mitigation efforts completed since the last HMP:

- None identified

### Proposed Hazard Mitigation Initiatives for the HMP Update

The City of Glens Falls participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.4-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X			X	X				X
Extreme Temperature	X	X			X	X				X
Flood	X	X		X	X	X	X			X
Severe Storm	X	X			X	X			X	X
Severe Winter Storm	X	X			X	X			X	X
Wildfire	X	X			X	X				X
Infestation	X	X			X	X				X
Dam Failure	X	X		X	X	X	X			X
Disease Outbreak	X	X			X	X				X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.4-17).

The table below summarizes the specific mitigation initiatives the City of Glens Falls would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.4-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023 –City of Glens Falls–001	Water System Hydraulic Analysis	1	Wildfire	<b>Problem:</b> The City's fire water hydrant system has issues with low flow. <b>Solution:</b> The City will perform a dynamic hydraulic analysis to address low flows in the City's fire water hydrant systems. The analysis would be completed in two parts – first create a model of the system, then identify and implement solutions.	Yes	None	Within 5 years	Fire Department, Water and Sewer, DPW	TBD by analysis	Restore flow for water hydrant system to improve wildfire response capabilities, increase preparedness	Assistance to Firefighters Grant Program, BRIC, PDM, HMGP, City budget	High	SIP	PP, ES
2023 –City of Glens Falls–002	Bush Street Flood Study	1	Severe Storm, Flood	<b>Problem:</b> Flooding is an ongoing issue in the Bush Street area, where residential building is currently ongoing. <b>Solution:</b> The City will evaluate causes of flooding and possible mitigation solutions in the Bush Street area. Cost effective solutions will be implemented.	No	None	Within 5 years	DPW, Water and Sewer	TBD by evaluation and selected solutions	Address current and potential future flooding issues	HMGP, BRIC, PDM, City budget	High	SIP, LP, R	PP, SP, PR
2023 –City	Community Developme	4	Earthquake, Extreme	<b>Problem:</b> Hazard mitigation integration	No	None	Within 5 years	Community Developme	Low	Increased integration,	City budget	High	LP, R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
City of Glens Falls-003	Community Hazard Mitigation Integration		Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<p>is needed in the Community Development program to guide safe development practices.</p> <p><b>Solution:</b> The City will integrate natural hazard mitigation strategies, such as property protection measures, into the Community Development program, as appropriate. The recommended hazard mitigation strategies will be compiled into a development guide to aid in enacting hazard mitigation practices. This guide will be consistent with the Hazard Mitigation Plan.</p>				City, Common council		safer development practices				
2023 -City of Glens Falls-004	Critical Facility Backup Power	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire	<p><b>Problem:</b> Critical facilities require backup power to maintain essential functions during and after disaster events.</p> <p><b>Solution:</b> The City will purchase and install permanent fixed generators and</p>	Yes	None	Within 5 years	DPW, Building and Codes, Facility managers	High	Protect public health and safety, and ensure continued operation of critical facility and essential functions	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management	High	SIP	ES





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>necessary electrical components at the following facilities:</p> <ul style="list-style-type: none"> <li>•WWTP</li> <li>•All City district school</li> <li>•City Hall</li> <li>•Standby power for four or five lift/pumping stations</li> <li>•Library (supplement current partial backup power.)</li> <li>•The Pines (private nursing home)</li> <li>•Stichman Towers (senior living) – replace older backup power system</li> </ul> <p>The generators will provide continuous power for services to ensure the health and safety of residents, businesses and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen</p>						during power outages.	Performance Grants (EMPG) Program, City Budget			



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				issues. Services such as heat and cooling will be uninterrupted to support the needs of vulnerable populations, community alerts and rapid inspections and monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities.										
2023 -City of Glens Falls-005	Dam Failure Education	2	Dam Failure	<p><b>Problem:</b> Infill housing is being considered in Queensbury and some other dam failure inundation areas. This could increase risk, resulting in increased dam hazard ratings.</p> <p><b>Solution:</b> The City will conduct education to improve public education/understanding of the dam failure inundation zones.</p>	Yes	No	2 years	DPW, Community Development, Building and Codes	Low	Increased public awareness	City budget	High	EAP	PI
2023 -City of	Climate Change Standards	1, 4	Earthquake, Extreme Temperatures	<b>Problem:</b> Climate change will result in changes in the	Yes	No	Within 5 years	DPW, Community Development	Low	Climate change planning	City budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Glens Falls-006			e, Flood, Severe Storm, Severe Winter Storm, Wildfire	<p>frequency and severity of hazard events, resulting in outdated development guidelines and maintenance practices.</p> <p><b>Solution:</b> The City will develop guidelines and standards for incorporating likely impacts of climate change into design and maintenance programs. This action provides long-term risk reduction by taking future climate change into account and proactively reducing risk to increase the city's ability to withstand future hazard events.</p>				nt, Building and Codes, Common Council						
2023 -City of Glens Falls-007	Flood Damage Prevention Ordinance Update	1	Flood	<b>Problem:</b> The City's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a	No	None	1 year	FPA, Common Council	Staff time	Meet state standards, increased building requirements	City budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				freeboard requirement. <b>Solution:</b> The City will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.										
2023 -City of Glens Falls-008	Floodplain Administrator Training	1, 4	Flood	<b>Problem:</b> The City's Floodplain Administrator requires additional training to increase capabilities. <b>Solution:</b> The City will send the FPA to training available from NYS and FEMA, potentially exploring certified floodplain manager training.	No	None	2 years	FPA	Staff time	Increase floodplain administration capabilities	City budget	High	LP R	PR, PI
2023 -City of Glens Falls-009	Support Updated NFIP Mapping	1, 4	Flood	<b>Problem:</b> The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are	No	None	Within 5 years	FPA	Staff time	Improved floodplain mapping	City budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				seeking public and stakeholder comment. <b>Solution:</b> To the extent applicable and feasible, the City shall use all available means of promoting broad local government and public involvement through announcing meetings and providing available supporting data from FEMA and NYS DEC to the public and stakeholders as applicable. The City will announce public meetings on their website and will engage the public through outreach channels including the city website.										
2023 -City of Glens Falls- 010	Substantial Damage Procedures	3	All Hazards	<b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration, improve recovery efforts	Municipal budget	High	LP R	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The City will develop official procedures for Substantial Damage and Substantial Improvement determinations.										
2023 -City of Glens Falls- O11	Critical Facility Flood Outreach 1	2	Flood	<b>Problem:</b> Finch, Pruyn&Co Landfill#1 Evoqua Water Technologies is a Tier II facility located in the 1-percent floodplain. The facility is a privately owned critical facility. <b>Solution:</b> The City FPA will conduct outreach to the facility manager to discuss flood risk and potential mitigation strategies to consider.	Yes	No	Within 6 months	FPA	Staff time	Facility manager aware of flood risk and potential mitigation actions	City budget	High	EAP	PI
2023 -City of Glens Falls- O12	Critical Facility Flood Outreach 2	2	Flood	<b>Problem:</b> The Island Drive Water Well is located in the 1-percent floodplain. The facility is a privately owned critical facility. <b>Solution:</b> The City FPA will conduct outreach to the facility manager to discuss flood risk and potential	Yes	No	Within 6 months	FPA	Staff time	Facility manager aware of flood risk and potential mitigation actions	City budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				mitigation strategies to consider.										

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

CRS Category:

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.





- *Public Information (PI)*—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)*—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.4-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-City of Glens Falls-001	Water System Hydraulic Analysis	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2023-City of Glens Falls-002	Bush Street Flood Study	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-City of Glens Falls-003	Community Development Hazard Mitigation Integration	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-City of Glens Falls-004	Critical Facility Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-City of Glens Falls-005	Dam Failure Education	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-City of Glens Falls-006	Climate Change Standards	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-City of Glens Falls-007	Flood Damage Prevention Ordinance Update	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-City of Glens Falls-008	Floodplain Administrator Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-City of Glens Falls-009	Support Updated NFIP Mapping	0	1	1	1	1	1	1	1	1	1	0	0	1	1	11	High
2023-City of Glens Falls-010	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-City of Glens Falls-011	Critical Facility Flood Outreach 1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-City of Glens Falls-012	Critical Facility Flood Outreach 2	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High



*Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).*



### 9.4.8 Action Worksheets

The following action worksheets were developed by the City of Glens Falls to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Critical Facility Backup Power		
<b>Project Number:</b>	2023-City of Glens Falls-004		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	Critical facilities require backup power to maintain essential functions during and after disaster events.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	<p>The City will purchase and install permanent fixed generators and necessary electrical components at the following facilities:</p> <ul style="list-style-type: none"> <li>• WWTP</li> <li>• All City district school</li> <li>• City Hall</li> <li>• Standby power for four or five lift/pumping stations</li> <li>• Library (supplement current partial backup power.)</li> <li>• The Pines (private nursing home)</li> <li>• Stichman Towers (senior living) – replace older backup power system</li> </ul>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	DPW, Building and Codes, Facility managers	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000 per facility	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000 per facility	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			



<b>Report of Progress:</b>	
<b>Update Evaluation of the Problem and/or Solution:</b>	



Action Worksheet		
Project Name:	Critical Facility Backup Power	
Project Number:	2023-City of Glens Falls-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of critical facilities
Property Protection	1	Project will protect buildings from power loss.
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	DPW, Building and Codes, Facility managers
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	





## SECTION 9.

### 9.5 TOWN OF HAGUE

This section presents the jurisdictional annex for the Town of Hague that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Hague's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.5.1 Hazard Mitigation Planning Team

The Town of Hague identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Supervisor, Highway Department, Zoning, and Floodplain Administrator. The Town Supervisor represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.5-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Edna A. Frazier, Supervisor/Town of Hague Address: 9793 Graphite Mountain Road, P.O. Box 509 Hague, NY 12836 Phone Number: 518-543-6161 Email: supervisor@townofhague.org	Name/Title: Matthew Coffin, Deputy Highway Superintendent Address: 9793 Graphite Mountain Road, P.O. Box 509 Hague, NY 12836 Phone Number: 518-543-6161 Email: zoning@townofhague.org
<b>NFIP Floodplain Administrator</b>	
Name/Title: Matthew Magee, Zoning Administrator Address: 9793 Graphite Mountain Road, P.O. Box 509 Hague, NY 12836 Phone Number: 518-543-6161 Email: zoning@townofhague.org	
<b>Additional Contributors</b>	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Catherine Clark, Assistant Flood Plain Administrator Method of Participation: Provided information on previous events, capabilities, NFIP administration capabilities, building permits, and the status of previous actions. Provided input on hazard rankings. Reviewed annex and contributed to mitigation strategy.	
Name/Title: Tim Fiallo, Highway Clerk Method of Participation: Provided information on the status of previous actions	
Name/Title: Matthew Magee, Zoning Administrator Method of Participation: Provided input on hazard rankings. Reviewed annex and contributed to mitigation strategy.	
Name/Title: Edna A. Frazier, Supervisor/Town of Hague Method of Participation: Reviewed annex and contributed to mitigation strategy.	

## 9.5.2 Municipal Profile

The Town of Hague is located in the Eastern Adirondacks and situated on the northern shore of Lake George at the northeast corner of Warren County. The Town is bordered on the east by Washington County and on the north by Essex County. The Town has a total land area of 79.6 square miles of which 64.0 square miles is land and 15.6 square miles is water. The Town includes one hamlet, Hague, and three neighborhoods: Graphite, Sabbath Day Point, and Silver Bay.

According to the U.S. Census, the 2020 population for the Town of Hague was [778633](#), a [4.69.4](#) percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that [4.13.8](#) percent of the population is 5 years of age or younger and [36.141.7](#) percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

[Additionally, the Town of Hague has the following vulnerability characteristics \(FEMA Resilience Analysis and Planning Tool\):](#)

- [6.64% of the population does not have a high school diploma](#)
- [10.66% of the population has a disability](#)
- [2.77% of households do not have a vehicle](#)
- [9.87% of the population is living below the poverty level](#)
- [5.39% of the population is unemployed](#)

## 9.5.3 Jurisdictional Capability Assessment and Integration

The Town of Hague performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.



- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Hague to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Hague. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.5-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Fire Prevention and Building Code	Local and State	Warren County Fire Prevention and Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town has adopted the Building Code of NY which sets provisions for safe construction. The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 160 – Zoning	Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance is established to promote health, safety and general welfare of the community and protect the property values and aesthetics of the community. The Ordinance also ensures optimum overall conservation, protection, development and use of scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the Adirondack Park.				
<b>Subdivision Ordinance</b>	Yes	Chapter 150 – Subdivision Ordinance	Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance empowers the Planning Board to review and approve, conditionally approve or disapprove plats showing lots, blocks or sites, with or without highways; to approve the development of entirely or partially undeveloped plats already on file. The regulations consider land subdivision as part of an orderly, efficient, and economical aspect of development for the Town. Land that is to be subdivided is required to be useful to the community, meaning it must have drainage, water supply, sewage, and other necessities.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources and can be used to restrict the subdivision of land within or adjacent to natural hazard areas.				
<b>Site Plan Ordinance</b>	Yes	Article VI of the Zoning Code	Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Permitted uses are examined through the site plan review requirements for each zoning district.				
<b>Stormwater Management Ordinance</b>	Yes	6 NYCRR 645 & 646	Local	Lake George Park Commission (LGPC)
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town adopted the New York State Department of Environmental Conservation Procedural and Substantive Regulations which protect the general welfare, safety and health of the public by protecting the quality of the ground and surface waters of the Park.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Environmental Protection Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 99 – Flood Damage, 1996	Federal, State, County and Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction. Flood fringe and Flood zones yes.</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li></ul>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands no</p> <p>F. Qualify for and maintain participation in the National Flood Insurance Program.</p> <p>The Town requires all new construction in the floodplain to be elevated 3 feet above ground level. No base flood elevations are available in the Town's FIRM.</p>				
<b>Wellhead Protection</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Emergency Management Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Climate Change Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Other</b>	Yes	Chapter 88 – Drainage Ditches	Local	Adirondack Park Agency and Town
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Chapter 88 – Drainage Ditches sets requirements for application and consultation for drainage ditches to prevent water damage from blocked ditches.</p>				
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Land Use Plan (Comprehensive Plan) Adopted 2003 Last amended in 2017	Local	Town Council, Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The land use policies in the Land Use Plan discourage development or redevelopment with natural hazard areas. The plan provides adequate space for expected future growth in areas located outside natural hazard areas.</p>				
<b>Capital Improvement Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Disaster Debris Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Floodplain Management or Watershed Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Stormwater Management Plan</b>	Yes	1985 the Town gave their authority to over Stormwater Management to the LGPC	LGPC	LGPC
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>All new development must incorporate stormwater management to parcels were new and replacement of structures occur.</p>				
<b>Open Space Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Urban Water Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Habitat Conservation Plan</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Economic Development Plan</b>	Yes	Adirondack Park Agency Economic Development Plan	Local	Adirondack Park Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan currently does not have a connection to hazards or hazard mitigation planning.				
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Community Forest Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Transportation Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Agriculture Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Tourism Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Comprehensive Emergency Management Plan – 2013	Local	Supervisor's Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Emergency Management Plan guides emergency response in the Town.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Substantial Damage Response Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Public Health Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Other	No	-	-	-
<i>How has or will this be integrated with the HIMP and how does this reduce risk?</i>				

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Hague to oversee and track development.

**Table 9.5-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"> <li>If you issue development permits, what department is responsible?</li> </ul>	N/A	Zoning
<ul style="list-style-type: none"> <li>If you do not issue development permits, what is your process for tracking new development?</li> </ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA
Do you have a buildable land inventory?	Yes	-
<ul style="list-style-type: none"> <li>If you have a buildable land inventory, please describe</li> </ul>	N/A	The Town of Hague has 452 Vacant RES Properties.
Describe the level of build-out in your jurisdiction.	N/A	Zoning is in place. The development of each zone is restricted by the slope and soils.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Hague and their current responsibilities that contribute to hazard mitigation.

**Table 9.5-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	<p>The Planning Board consists of five members and meets on the first Thursday of each month. The purpose of the Planning Board is to:</p> <ul style="list-style-type: none"> <li>Assure that the development within the Town is consistent with the Land Use Plan (Comprehensive Plan)</li> <li>Conduct site plan reviews as required by the Town Zoning and Codes, and review subdivision requests as required by the Town Subdivision Code</li> </ul>





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> <li>Make recommendations to the Zoning Board of Appeals when requested as part of the variance appeal process.</li> </ul>
Zoning Board of Adjustment	Yes	<p>The Zoning Board of Appeals is a five member board that meets on the fourth Thursday of each month. The purpose of the Zoning Board is:</p> <ul style="list-style-type: none"> <li>To render determinations where variances from the zoning code are requested.</li> <li>To hear appeals from applicants seeking interpretation or reversal of determination by the Zoning Enforcement Officer.</li> </ul>
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Town Highway Department is responsible for maintenance and repairs of Town roads including, paving, drainage, brush/mowing, sanding and salting.
Construction/Building/Code Enforcement Department	Yes	<p>Zoning Enforcement Officer is responsible for:</p> <ul style="list-style-type: none"> <li>Issues permits for land use, zoning, septic, subdivision and variance</li> <li>Provides technical assistance to the Planning Board, the Zoning Board of Appeals and the Local Board of Health</li> <li>Provides the point of contact to report alleged zoning or sanitary violations</li> <li>Administers the Town Property Maintenance Law</li> <li>Administers the Flood Hazard Zoning District (Flood Plain)</li> </ul>
Emergency Management/Public Safety Department	No	-
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Mutual Aid agreements exist between the Fire Department and Warren County
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with knowledge of land development and land management practices	Yes	Engineers are hire on a need basic. All codes allow for the Boards to hire professional services to advise on all permit applications.
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Zoning Enforcement Officer
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	Warren County Emergency Management provides services.
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-
<b>Administrative/technical capability self-assessment</b>		
<b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b>		
Engineers are hired on a need basic. All codes allow for the Boards to hire professional services to advise on all permit applications.		

## Fiscal Capability

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

**Table 9.5-5. Fiscal Capabilities**

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



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Hague.

**Table 9.5-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	-

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Hague.

**Table 9.5-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	O6 6Y	1/1/2019
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	N/A	-	-
Storm Ready Certification	No	(Warren County participates)	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable



## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.5-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Strong
Infestation	Weak
Dam Failure	Moderate
Disease Outbreak	Moderate

## 9.5.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Hague.

**Table 9.5-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Hague	1	2	\$8,021	0	0	0

Source: FEMA 2023

Notes:

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.



*RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.*

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Hague.

**Table 9.5-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	The Town is seeking to map areas that are flood prone or on the flood fringe. The Town does not currently maintain a list of properties that have been damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	The Town does not current have substantial damage procedures.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	No, flood hazard maps lack base flood elevation. Updated FIRMs are needed with base flood elevations to guide proper development
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Zoning
Are any certified floodplain managers on staff in your jurisdiction?	Zone Enforcement Officer
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	Yes. Training for the ZEO. <a href="#">Due to cost barriers, online CRS and NAI webinars that are offered for free from the ASFM website could be utilized.</a>
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.



NFIP Topic	Comments
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	FEMA maps and GIS.
What are the barriers to running an effective NFIP program in the community, if any?	Lack of staff and funding.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAV: October 1, 2010
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> <li>What is the date that your flood damage prevention ordinance was last amended?</li> </ul>	Section 160-49 amended 11-10-1998
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>	Meets minimum NFIP requirements but flood damage prevention ordinance requires update to meet state standards.
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, via the Planning Board under Site Plan review.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

### 9.5.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. [Table 9.5-11](#) summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.5-11. Recent and Expected Future Development**

Type of Development	2017	2018	2019	2020	2021	2022
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)						
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA



Type of Development	2017		2018		2019		2020		2021		2022	
Single Family	6	0	8	0	6	1	3	0	5	0	7	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total New Construction Permits Issued</b>	<b>6</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>7</b>	<b>0</b>
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated												

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.5.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Hague's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Hague has significant exposure are provided. [The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.](#)~~The maps show the location of potential new development, where available.~~





Figure 9.5-1. Town of Hague Flood Hazard Area Extent and Location Map

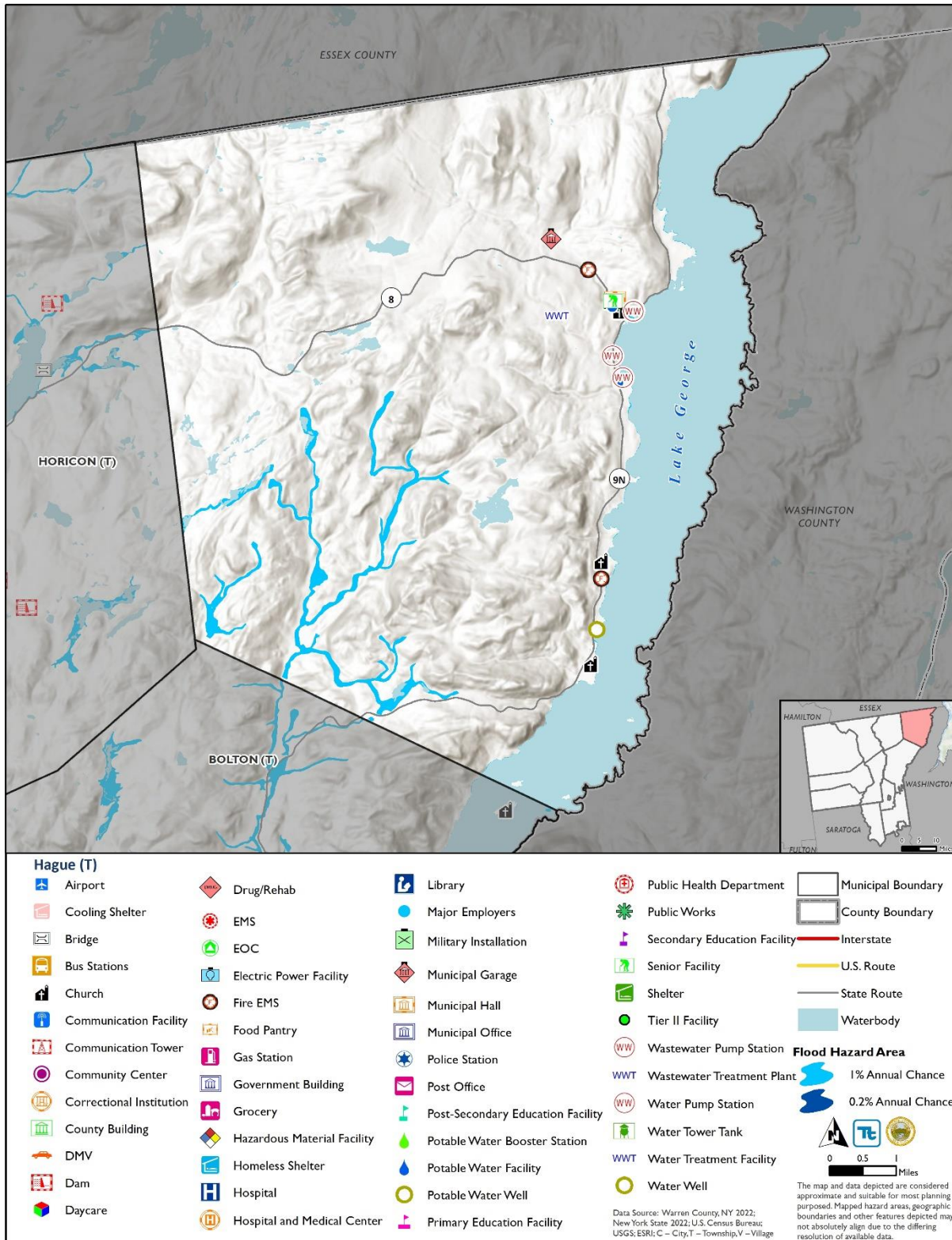




Figure 9.5-2. Town of Hague Earthquake (Soil Class) Hazard Area Extent and Location Map

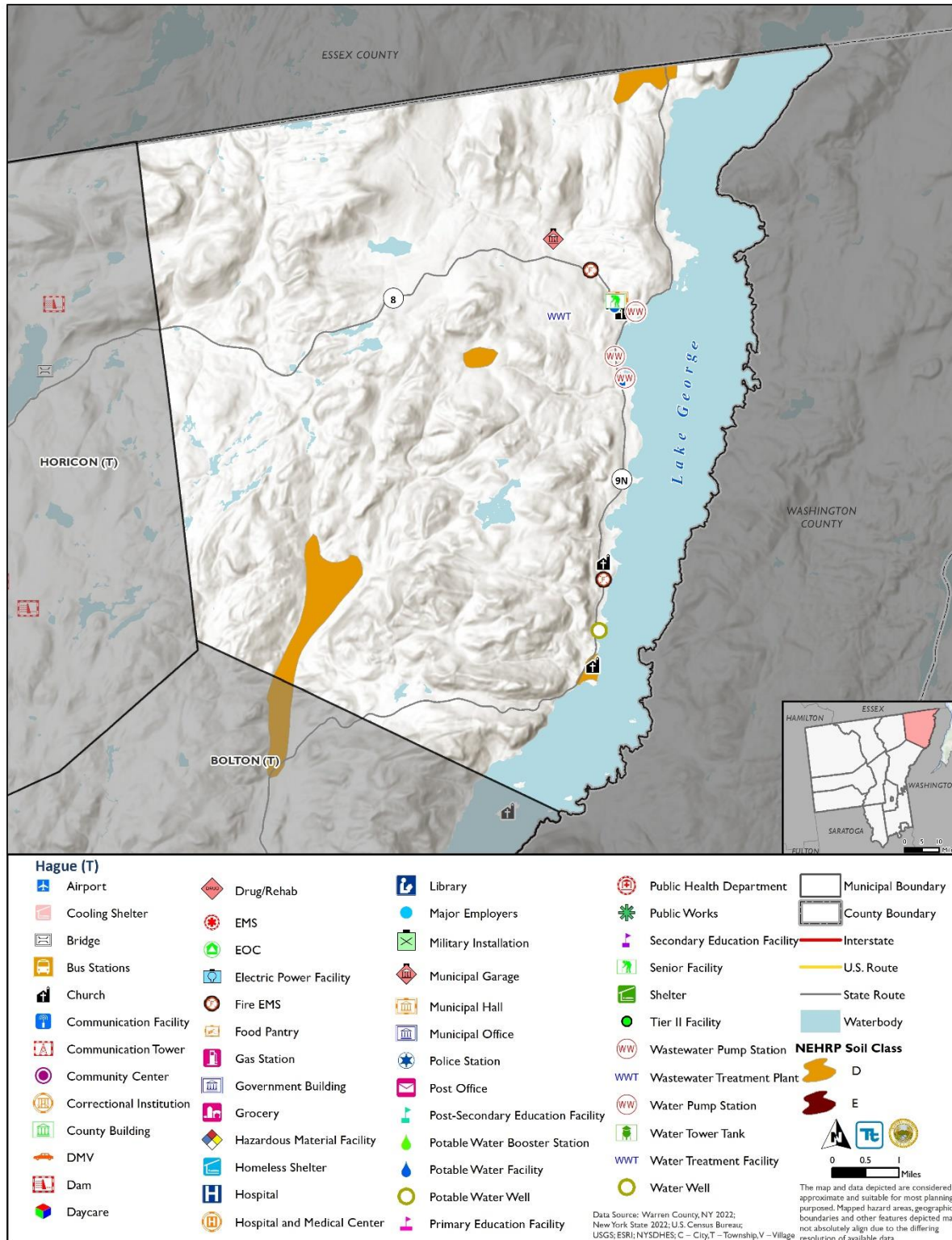
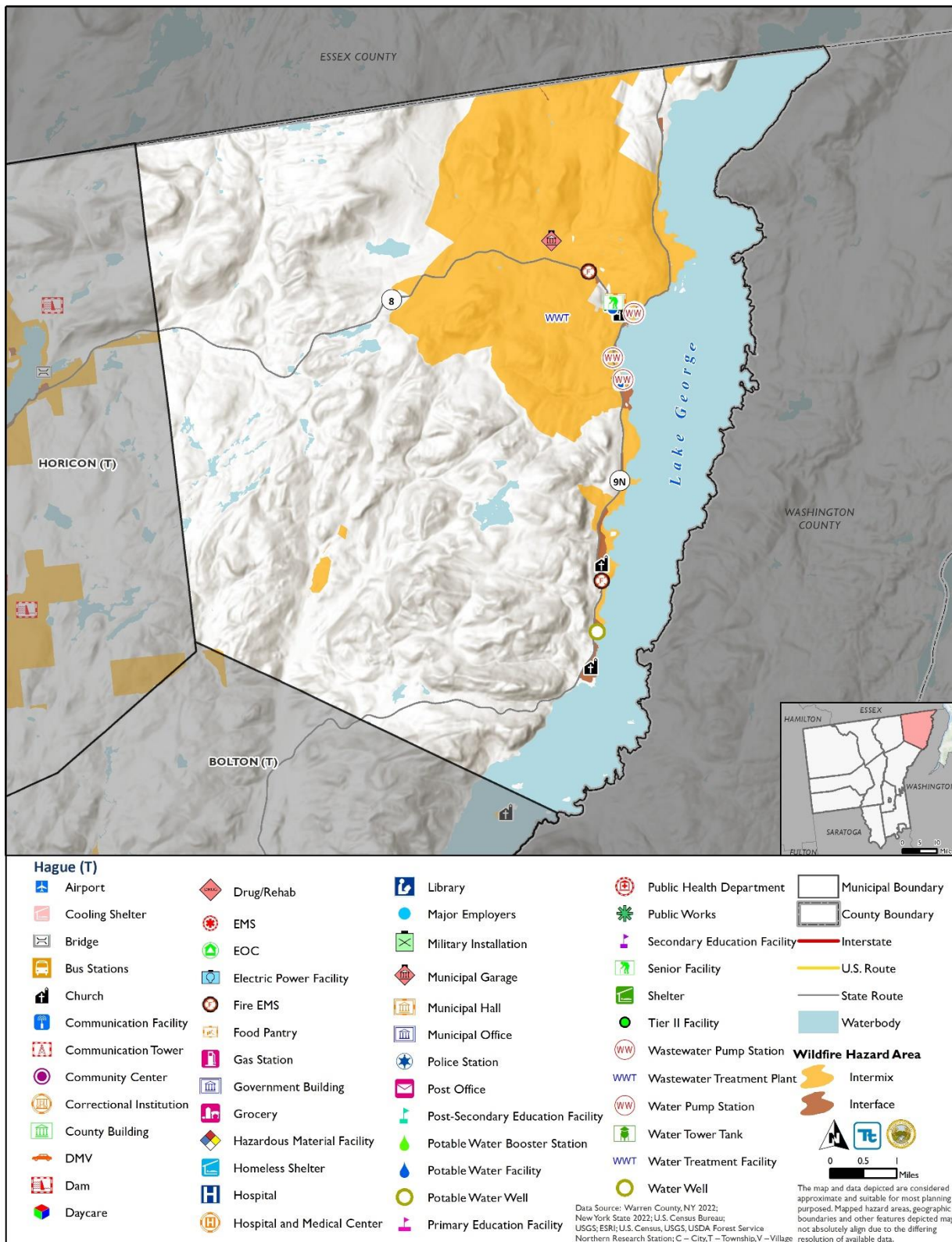






Figure 9.5-3. Town of Hague Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Hague's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. [Table 9.5-12](#) provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.5-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
May 31, 2017	Hail	N/A	Severe thunderstorms impacted eastern New York on May 31, 2017 as a cold upper-level disturbance interacted with a moderately unstable airmass. Showers and thunderstorms began in the late morning across western and central New York, and rapidly intensified upon reaching the Capital District around 4 pm. With cold air and strong winds at mid-levels of the atmosphere and moist air near the surface, the environment was prime for large hail.	Although the County was impacted, the Town did not report substantial impacts.
June 18, 2018	Thunderstorm Wind	N/A	A line of strong thunderstorms with gusty winds moved through the region ahead of a cold frontal boundary. A few of these storms produced damaging wind gusts in Warren county, knocking down trees and wires.	A tree was knocked down on Route 9N.
October 31, 2019 – November 1, 2019	Severe Storms, Straight Line Winds, Flooding (DR-4472)	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New	There were six roads in the town of Hague damaged or washed out by flooding, including Route 8 near Graphite.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York. A state of emergency was declared for Warren County, and boil water notices were issued in Warren County due to floodwater inundation of private and public water systems.	
January 20, 2020	COVID-19 Pandemic (DR-4480) and (EM-3434)	Yes	-	The Town was subject to closures and social distancing/masking requirements.
August 23, 2020	Thunderstorm Wind	N/A	Thunderstorms developed over portions of eastern New York during the afternoon of the 23rd. Some of these storms became severe, resulting in downed trees and wires. Hail up to 1.5 inches was also reported in Albany county.	Trees and wires downed on Route 9N near Rogers Rock Campground.
August 29, 2020	Thunderstorm Winds	No	Thunderstorms developed over portions of eastern New York during the afternoon of the 29th. A couple of these storms produced hail up to ping pong ball size. They later spawned two EF1 tornadoes in the towns of Stillwater and Schaghticoke, with damage to a couple of residences and a high school. An EFO tornado briefly touched down in southwestern Warren County. Sporadic wind damage was noted elsewhere.	Wires downed in the Town of Hague.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
June 21, 2021	Thunderstorm Winds	N/A	A lifting warm front across the region brought a hot and humid air mass into the region, leading to maximum heat indices reaching 95 to 98 degrees across some valley locations of eastern New York. An approaching cold front from the west led to numerous showers and thunderstorms during the afternoon and evening hours. A funnel cloud was spotted by an observer in Warren County looking northward toward Lake George.	Trees and wires were downed near Route 8 and 9N in the Town of Hague.

**Notes:**

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Hague's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Hague. The Town of Hague reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:



- The Town changed the hazard ranking for flood from low to medium, noting that culverts in the Town are undersized and contribute to flooding under increasingly severe heavy rainfall events.
- The Town changed the hazard ranking for wildfire from low to medium, noting that wildland areas are congested and require clearing to prevent severe wildfire. However, the Town lacks the authority to complete this work and relies on NYS DEC.
- The Town agreed with the remainder of the calculated hazard rankings.

**Table 9.5-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Medium	High	High	Medium	Medium

Dam Failure	Disease Outbreak
Medium	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.5-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
LAKESIDE REGIONAL CHURCH	Religious	X	X	2023-Town of Hague-015	-
Hague Senior Citizens Club, Inc.	Health and Medical	X	X	2023-Town of Hague-015	-

Source: Warren County 2022





## Identified Issues

After review of the Town of Hague's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Hague identified the following vulnerabilities within their community:

- The Silver Bay Road culvert is undersized and contributes to flooding.
- The Yaw Road culvert is undersized and contributes to flooding.
- The Town Transfer Station culvert is undersized and contributes to flooding.
- The Terrace Road culverts are undersized and contributes to flooding.
- All culverts on Padanarum Road are undersized and require replacement.
- The Town's Land Use Plan was adopted in 2003 and last amended in 2017. When the plan is updated, it will be important to integrate information from this hazard mitigation plan.
- Additional training is needed for Town staff to respond to hazard events and mitigate risk. In particular, the Zoning Enforcement Officer requires additional training in floodplain management.
- It is important for the Town to have buildings with flood risk identified and mapped for emergency response and planning purposes. Current flood maps from FEMA are considered too vague.
- Private property owners may be unaware of opportunities to mitigate risk to their properties.
- The Town's flood damage prevention ordinance is outdated and lacks the state's freeboard requirement.
- While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals.
- Wildland areas are congested and require clearing to prevent severe wildfire. Wildland areas are under the jurisdiction of NYS DEC.
- The FIRM for the Town of Hague lacks base flood elevations. This limits data to inform proper construction elevations within the floodplain.
- There are two critical facilities located in the SFHA: Lakeside Regional Church and Hague Senior Citizens Club, Inc.. Neither critical facility is owned by the Town.

### 9.5.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going



programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

DRAFT



**Table 9.5-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost		
THG-1	Integrate the risk assessment and recommendations of the hazard mitigation plan into the Town's Land Use Plan (Comprehensive Plan).	All Hazards		Town Council, Planning Board	No Progress	Level of Protection		1. Include in 2023 HMP 2. 3.
						Damages Avoided; Evidence of Success		
THG-2	Arrange for additional training for relevant staff on hazard risk reduction.	All Hazard		Town Supervisor, County Emergency Management	Ongoing Capability	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-3	Implement measures to ensure all critical facilities in the floodplain (both in 1% and 0.2% flood zones) are protected to the 500-year flood (0.2 percent annual chance flood) level.	Flood, Sever Storm		Town DPW, Planning Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-7	Educate residents regarding options for mitigating their properties from natural hazards using various outreach	All Hazards		Town Supervisor, County Emergency Services	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided;		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	techniques including informational mailers, brochures, school presentations, and other outreach activities.					Evidence of Success		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
THG-8	Update current inventory of at-risk buildings and infrastructure to include at-risk structures outside of the flood and flood-fringe zones, including those located along stream and brook corridors, impacted during a 100 yr. event.	Flood, Severe Storm		Town Board, Superintendent of school districts, County Office of Emergency Services	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-9	Boat Launch Culvert pipe replacement	Flood		Town of Hague, Army Corp of Engineering, & NYSDEC	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-10	Semi-annual inspection of all streams and brooks for Beaver dams and any tree that presents a hazard of falling into the stream	Flood,		Town of Hague Highway Department & NYSDEC; Warren County soil & Water	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-11	Rain gardens - Erosion and Stormwater prevention	Flood, Severe Storm		Town of Hague, Zoning Enforcement Officer	Complete	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided;		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Evidence of Success		
THG-12	Install catch basins along state roads.	Flood, Severe Storm		NYSDOT, Town of Hague	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
THG-13	Vegetation removal from brook beds at the intersection of all bridges, Town, County, & NYS	Flood, Severe Winter Storm		Town of Hague Highway Department, Warren County soil & Water	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in [Table 9.5-15](#), the Town of Hague identified the following mitigation efforts completed since the last HMP:

- Highway crew have improved culverts in over 21 lane miles of Town roads and enlarged over 13 locations since 2017 while conducting inspections and cleanouts of all Town culverts.
- Pudding Island Road: 40' x 36" culvert pipe replaced.
- Mc Coy Road– Replacement/Removal of culvert and upgrade and installation of Bridge in place of same. Total funds spent in the amount of \$492,000 +/-.

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Hague participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.5-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA						CRS			
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X			X	X	X	X			
Extreme Temperature	X			X	X	X	X			
Flood	X	X		X	X	X	X		X	
Severe Storm	X	X		X	X	X	X		X	
Severe Winter Storm	X			X	X	X	X			
Wildfire	X		X	X	X	X	X	X		
Infestation	X			X	X	X	X			
Dam Failure	X			X	X	X	X			
Disease Outbreak	X			X	X	X	X			

Note: Mitigation categories are described below the Mitigation Initiatives Table ([Table 9.5-17](#)).

The table below summarizes the specific mitigation initiatives the Town of Hague would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.5-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023–Town of Hague–001	Silver Bay Road Culvert Replacement	1	Severe Storm, Flood	<b>Problem:</b> The Silver Bay Road culvert is undersized and contributes to flooding. <b>Solution:</b> The Town will replace and install a box culvert to the 50-year flood event.	No	None	1 year	Highway Department	\$257,455 (Federal \$193,091.25 and State \$32,181.88)	Reduction in flooding, flood damages	FEMA funding reimbursement for 2019 damages.	High	SIP	SP
2023–Town of Hague–002	Yaw Road Culvert Replacement	1	Severe Storm, Flood	<b>Problem:</b> The Yaw Road culvert is undersized and contributes to flooding. <b>Solution:</b> The Town will replace the existing culvert pipe with a 60' x 40' wide wing wall pipe.	No	None	2 years	Highway Department	\$ 918,904.71	Reduction in flooding, flood damages	CHIPS, HMGP, BRIC, PDM, Town budget	High	SIP	SP
2023–Town of Hague–003	Town Transfer Station Culvert Upsizing	1	Severe Storm, Flood	<b>Problem:</b> The Town Transfer Station culvert is undersized and contributes to flooding. <b>Solution:</b> The Town will install 100' of new pipe and an expansion from 12" to 16" in diameter.	No	None	Within 5 years	Highway Department	High	Reduction in flooding, flood damages	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP
2023–Town of Hague–004	Terrace Road Culvert Upsizing	1	Severe Storm, Flood	<b>Problem:</b> The Terrace Road culverts are undersized and contributes to flooding. <b>Solution:</b> The Town will complete the following culvert upgrades: A) 60' culvert pipe upgraded from 10" to 12"; B) 220' Culvert pipe upgraded from 10" to 12"; C) 40' Culvert pipe upgraded from 10" to 12".	No	None	Within 5 years	Highway Department	High	Reduction in flooding, flood damages	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP





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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Hague-005	Padanarum Road Culvert Upsizing	1	Severe Storm, Flood	<b>Problem:</b> All culverts on Padanarum Road are undersized and require replacement. <b>Solution:</b> The Town will upsize and replace all culverts on Padanarum Road to the 50-year storm specification.	No	None	Within 5 years	Highway Department	High	Reduction in flooding, flood damages	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP
2023-Town of Hague-006	Hazard Mitigation Integration In Land Use Plan	1, 4	<a href="#">Earthquake</a> , <a href="#">Extreme Temperature</a> , <a href="#">Flood</a> , <a href="#">Severe Storm</a> , <a href="#">Severe Winter Storm</a> , <a href="#">Wildfire</a> , <a href="#">Dam Failure</a> , <a href="#">All Hazards</a>	<b>Problem:</b> The Town's Land Use Plan was adopted in 2003 and last amended in 2017. When the plan is updated, it will be important to integrate information from this hazard mitigation plan. <b>Solution:</b> The Town will update the Land Use Plan and use information such as hazard areas and frequency to guide land use decision making.	No	None	Within 5 years	Town Council, Planning Board	Low	Improved integration	Town budget	High	LPR	PR
2023-Town of Hague-007	Staff Training	4	<a href="#">Earthquake</a> , <a href="#">Extreme Temperature</a> , <a href="#">Flood</a> , <a href="#">Severe Storm</a> , <a href="#">Severe Winter Storm</a> , <a href="#">Wildfire</a> , <a href="#">Infestation</a> , <a href="#">Dam Failure</a> , <a href="#">Disease</a>	<b>Problem:</b> Additional training is needed for Town staff to respond to hazard events and mitigate risk. In particular, the Zoning Enforcement Officer requires additional training in floodplain management. <b>Solution:</b> The Town will provide training opportunities for staff on hazards and hazard	No	None	2 years	Town Council, Zoning Enforcement Office	Staff time	Increased capabilities of Town staff	Town budget	High	LPR, EAP	PR, PI



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			<a href="#">Outbreak/All Hazards</a>	mitigation with an emphasis on future conditions. The Town will have the ZEO complete floodplain management trainings offered by FEMA and NYS DEC and pursue CFM certifications.										
2023-Town of Hague-008	Flood Risk Inventory	2, 3	Flood	<b>Problem:</b> It is important for the Town to have buildings with flood risk identified and mapped for emergency response and planning purposes. Current flood maps from FEMA are considered too vague. <b>Solution:</b> The Town will update the current inventory of at-risk buildings and infrastructure to include at-risk structures outside of the flood and flood-fringe zones, including those located along stream and brook corridors, impacted during a 100 yr. event.	No	None	2 years	FPA, Planning Board	Low	Improved understanding of flood risk	BRIC, Town budget	High	EAP, LPR	PI, PR
2023-Town of Hague-009	Public Education Program	2	<a href="#">Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire</a>	<b>Problem:</b> Private property owners may be unaware of opportunities to mitigate risk to their properties.	No	Noe	2 years	Town Council	Low	Increased public awareness of potential mitigation measures for	Town budget	High	EAP	PI



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			<a href="#">Infestation, Dam Failure, All Hazards</a>	<b>Solution:</b> The Town will educate residents regarding options for mitigating their properties from natural hazards using various outreach techniques including informational mailers, brochures, school presentations, and other outreach activities.						private property				
2023-Town of Hague-010	Flood Damage Prevention Ordinance Update	1, 4	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance is outdated and lacks the state's freeboard requirement. <b>Solution:</b> The Town will update the ordinance to include a 2 foot freeboard requirement for all construction.	No	None	1 year	FPA, Town Council	Staff time	Meet state standards, stronger flood protection for new construction	Town budget	High	LPR	PR
2023-Town of Hague-011	Substantial Damage Procedures	4	<a href="#">Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure, All Hazards</a>	<b>Problem:</b> While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The municipality will develop official procedures for Substantial Damage and Substantial Improvement <a href="#">determinations</a> .	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration, <a href="#">improve recovery efforts</a>	Municipal Budget	High	LPR	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<a href="#">for earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazard events..</a>										
2023-Town of Hague-012	Wildfire Risk Reduction	5	Wildfire	<p><b>Problem:</b> Wildland areas are congested and require clearing to prevent severe wildfire. Wildland areas are under the jurisdiction of NYS DEC.</p> <p><b>Solution:</b> The Town will submit information on problem areas for wildfire in wildlands to NYS DEC. The Town will provide additional information/ support to NYS DEC as necessary.</p>	No	None	Within 5 years	Administration, NYS DEC	Staff time	Reduction in wildfire risk	Town budget	High	NSP	NR
2023-Town of Hague-013	Updated FIRM Request	4	Flood	<p><b>Problem:</b> The FIRM for the Town of Hague lacks base flood elevations. This limits data to inform proper construction elevations within the floodplain.</p> <p><b>Solution:</b> The Town will continue to request updated FIRMs from FEMA that will include BFEs. When remapping is initiated, the Town will provide data and information as necessary to support FEMA.</p>	No	None	1 year	FPA, Administration, FEMA	Staff time	Updated FIRMs with BFEs established	Municipal budget	High	LPR	PR
2023-Town of	Roadway Damage and	4	Flood, Severe Storm	<b>Problem:</b> The Town's roadways are often damaged during severe storm events.	No	None	3 years	Administration, Highway Department	Low	Improved documentation of damages,	Town budget	High	LPR	PR, PP



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Hague-014	Maintenance Documentation			<p>Roadways are under the jurisdiction of the Town, County, and State. Consistent documentation of damages is needed to alert the proper jurisdictions, apply for FEMA reimbursement, and document maintenance.</p> <p><b>Solution:</b> The Town will develop standard procedures or a mobile application to document flood damages and maintenance to support potential requests for reimbursement, hazard mitigation applications, and alert other jurisdictions of damage to their infrastructure.</p>						communication with County and State agencies.				
2023-Town of Hague-015	Critical Facilities Flood Outreach	1, 3	Flood	<p><b>Problem:</b> There are two critical facilities located in the SFHA: Lakeside Regional Church and Hague Senior Citizens Club, Inc.. Neither critical facility is owned by the Town.</p> <p><b>Solution:</b> The FPA will conduct outreach to each facility manager, noting the exposure to flooding and potential mitigation actions.</p>	Yes	No	Within 6 months	FPA	Staff time	Critical facility managers aware of flood risk, mitigation options	Town budget	High	EAP	PI

Notes:2



Not all acronyms and abbreviations defined below are included in the table.

**Acronyms and Abbreviations:**

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

**Potential FEMA HMA Funding Sources:**

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

**Timeline:**

The time required for completion of the project upon implementation.


**Cost:**

The estimated cost for implementation.

**Benefits:**

A description of the estimated benefits, either quantitative and/or qualitative.

**Critical Facility:**

Yes  Critical Facility located in 1% floodplain

**Mitigation Category:**

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.5-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Hague-001	Silver Bay Road Culvert Replacement	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023-Town of Hague-002	Yaw Road Culvert Replacement	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Hague-003	Town Transfer Station Culvert Upsizing	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Hague-004	Terrace Road Culvert Upsizing	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Hague-005	Padanarum Road Culvert Upsizing	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Hague-006	Hazard Mitigation Integration In Land Use Plan	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Hague-007	Staff Training	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Hague-008	Flood Risk Inventory	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Hague-009	Public Education Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Hague-010	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Hague-011	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Hague-012	Wildfire Risk Reduction	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High





Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Hague-013	Updated FIRM Request	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Hague-014	Roadway Damage and Maintenance Documentation	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Hague-015	Critical Facilities Flood Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.5.8 Action Worksheets

The following action worksheets were developed by the Town of Hague to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Yaw Road Culvert Replacement		
<b>Project Number:</b>	2023-Town of Hague-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The Yaw Road culvert is undersized and contributes to flooding.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will replace the existing culvert pipe with a 60' x 40' wide wing wall pipe.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	At least a 5-year event; will be determined once project is complete	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, flood damages
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$ 918,904.71	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, PDM, CHIPS, Town budget
<b>Responsible Organization:</b>	Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove road	\$20,000	Roadway cannot be removed
	Relocate road to another location	\$50,000	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
Project Name:	Yaw Road Culvert Replacement	
Project Number:	2023-Town of Hague-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadways from flooding, culvert damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Highway Department
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Damages to Yaw Road due to a 2019 storm event





## SECTION 9.

### 9.6 TOWN OF HORICON

This section presents the jurisdictional annex for the Town of Horicon that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Horicon's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.6.1 Hazard Mitigation Planning Team

The Town of Horicon identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Supervisor, Highway Department, and Zoning. The Supervisor represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.6-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael N. Geraci, Supervisor Address: P.O. Box 90, State Route 8, Brant Lake, NY 12815-0090 Phone Number: -494-3867 Email: supervisor@horiconny.gov	Name/Title: Darian Granger, Highway Superintendent Address: P.O. Box 90, State Route 8, Brant Lake, NY 12815-0090 Phone Number: 518-494-2115 Email: highway@horiconny.gov
<b>NFIP Floodplain Administrator</b>	
Name/Title: Kristena Williams Zoning Administrator Address: P.O. Box 90, State Route 8, Brant Lake, NY 12815-0090 Phone Number: 518-494-4245 Email: zoningplanning@horiconny.gov	
<b>Additional Contributors</b>	
Name/Title: Michael N Geraci, Supervisor	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on previous events, capabilities. Provided input on hazard rankings. Reviewed annex. Contributed to mitigation strategy.	
Name/Title: Matthew Magee, Zoning Administrator	
Method of Participation: Provided information on NFIP administration, status of previous mitigation actions	
Name/Title: Darian Granger, Highway Superintendent	
Method of Participation: Reviewed annex	

## 9.6.2 Municipal Profile

The Town of Horicon is in the Adirondack Park on Warren County's northern border. Horicon is bordered by the Towns of Schroon to the north, Hague to the east, Bolton to the south, and Chester to the west. It is part of the Glens Falls Metropolitan Statistical Area. The Town has a total land area of 71.8 square miles of which 66.1 square miles is land and 5.7 square miles is water. The Town includes six hamlets: Adirondack, Brant Lake, Pottersville, Schroon Lake, South Horicon, and Starbuckville. Brant Lake is located in the central portion of the Town and Schroon Lake is located partly in the northwest part of Town. The major through fare within the town is NYS Route 8.

According to the U.S. Census, the 2020 population for the Town of Horicon was 1,471, a 5.9 percent increase from the 2010 Census. Data from the 2020 U.S. Census indicate that 2.2 percent of the population is 5 years of age or younger and 28.8 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Horicon has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 6.64% of the population does not have a high school diploma
- 10.66% of the population has a disability
- 2.77% of households do not have a vehicle
- 9.87% of the population is living below the poverty level
- 5.39% of the population is unemployed

## 9.6.3 Jurisdictional Capability Assessment and Integration

The Town of Horicon performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.





- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Horicon to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Horicon. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.6-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Building and Fire Code	State and Local	Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town adopted the New York State Uniform Fire Prevention and Building Code. The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Zoning Ordinance, 2016	Local	Zoning Administrator
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance regulates the zoning districts throughout the Town. The purpose of this Local Law is to promote the health, safety, and general welfare of the community and protect the property values and aesthetics of the community by channeling and directing growth and by regulating and restricting the height, number of stories and size of buildings and other structures, the percentage of lot that may be occupied, the size of yard, courts and other open spaces, the density of population and the location and use of development, structures and land for commercial, industrial, residential and other purposes, to the extent permissible within the proper exercise of the police power.  It is the further purpose and objective of this Local Law to ensure optimum overall conservation, protection, development and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the Adirondack Park and to preserve the beauty and character of the Adirondack Park setting to the benefit of the community; and to retain the natural vistas of the Adirondacks to the benefit of the residents and visitors to the community.				
<b>Subdivision Ordinance</b>	Yes	Subdivision Ordinance	Local	Zoning Administrator
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Subdivision Regulations require a pavement width of 20 feet with 2 feet shoulders for both Town highways and private roads. Newly constructed Town highways must have an asphalt driving surface. Private roads may have a gravel surface provided that slopes do not exceed 7 percent.				
<b>Site Plan Ordinance</b>	Yes	Zoning Ordinance – Site Plan	Local	Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of Site Plan Approval is to ensure that the design, layout and operation of an allowed use within a district:</p> <ol style="list-style-type: none"> <li>1. Minimizes adverse impacts upon neighboring properties, the natural and man-made environment, roadways, and the community in general;</li> <li>2. Is in keeping with the character of the area in which it is located; and</li> <li>3. Is consistent with the goals and objectives of the Town of Horicon Comprehensive Plan.</li> </ol>				
<b>Stormwater Management Ordinance</b>	No	-	-	-
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.</p>				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	-	-	-
<b>Flood Damage Prevention Ordinance</b>	Yes	Flood Damage Prevention Ordinance	Federal, State, County and Local	Zoning Administrator
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ol style="list-style-type: none"> <li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities</li> <li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li> <li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters</li> <li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li> <li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands</li> <li>F. Qualify for and maintain participation in the National Flood Insurance Program.</li> </ol> <p>There are no Base Flood Elevations established for the Town of Horicon.</p>				
<b>Wellhead Protection</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Emergency Management Ordinance	No	-	-	-
Climate Change Ordinance	No	-	-	-
Other	No	-	-	-
<b>Planning Documents</b>				
Comprehensive Plan	Yes	Town of Horicon Comprehensive Plan, 2010	Local	Comprehensive Plan Steering Committee
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan establishes a guide for future growth and development in the Town. The Plan discusses the environmental resources of the Town, examines current land use patterns, analyzes growth trends, discusses future needs and established policies designed to insure the promotion of health, safety, and general welfare of the existing and future Town residents.				
Capital Improvement Plan	No	-	-	-
Disaster Debris Management Plan	No	-	-	-
Floodplain Management or Watershed Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	No	-	-	-
Urban Water Management Plan	No	-	-	-
Habitat Conservation Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Community Wildfire Protection Plan	No	-	-	-
Community Forest Management Plan	No	-	-	-
Transportation Plan	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	Local, County	Warren County OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town utilizes the Warren County Comprehensive Emergency Management Plan prior to and during hazard events to establish roles for Town departments and areas of safety for residents.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<b>Public Health Plan</b>	No	-	-	-
<b>Other</b>	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Horicon to oversee and track development.

**Table 9.6-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	Zoning
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	Warren County issues permits.
Do you have a buildable land inventory?	Yes	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	There are buildable parcels through the Town of Horicon
Describe the level of build-out in your jurisdiction.	N/A	Minimal

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Horicon and their current responsibilities that contribute to hazard mitigation.

**Table 9.6-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Town of Horicon Planning Board is a five member board appointed by the Town Board. The Planning Board considers applications for Major and Minor Subdivisions, Conditional Uses (Site Plan Review) and Boundary Line Adjustments.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals (ZBA) for the Town of Horicon is a five-member board appointed by the Town Board. The Zoning Board of Appeals (ZBA) considers applications for exceptions to the Town's Zoning regulations such as Area Variances, Use Variances, and Appeals/Interpretation of Determination from the Zoning Administrator.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway Department is responsible for maintaining approximately 52 miles of paved town roads and associated infrastructure including: <ul style="list-style-type: none"><li>Snow plowing and sanding</li><li>Road re-surfacing and grading</li><li>Pruning &amp; removing trees along town highway roads</li><li>Installing &amp; repairing culverts</li></ul>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> <li>Digging &amp; maintaining ditches</li> <li>Provide proper channeling of road &amp; storm water runoff</li> </ul> <p>Current equipment includes:</p> <ul style="list-style-type: none"> <li>5 salt spreaders/plows</li> <li>Grader</li> <li>2 front loaders</li> </ul> <p>New York State DOT and Warren County have primary responsibility for highway repairs and reconstruction on roadways that border Schroon Lake and Brant Lake.</p>
Construction/Building/Code Enforcement Department	No	Code enforcement is the responsibility of Warren County.
Emergency Management/Public Safety Department	No	-
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Warren County has contracted with a firm to implement an emergency notification system to be operational in early 2023.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Mutual aid agreements with Chestertown Fire Department
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	Rely on Warren County
Grant writer(s)	No	-
Resilience Officer	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

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

**Table 9.6-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Horicon.

**Table 9.6-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Active social media forum via website and Facebook.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Warren County has contracted with a firm to implement an emergency notification system to be operational in early 2023.
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform	No	-





Outreach Resources	Available? (Yes/No)	Comment:
citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"> <li>If yes, please describe.</li> </ul>		

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Horicon.

**Table 9.6-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–
Public Protection (ISO Fire Protection Classes 1 to 10)	No	–	–
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	–	–
Storm Ready Certification	No	(Warren County participates)	–
Firewise Communities classification	No	–	–
Other	No	–	–

Note:

N/A Not applicable  
– Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.6-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate



Hazard	Adaptive Capacity – Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.6.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Horicon.

**Table 9.6-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Horicon	11	5	\$112,548	0	0	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

### Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Horicon.

**Table 9.6-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	No
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	On case-by-case bases, collaboration of Highway Superintendent, Zoning Administrator and Town Supervisor.



NFIP Topic	Comments
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	Six claims have been paid since 2016
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No, too vague.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Zoning Administrator
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	The Floodplain Administrator would benefit from training. Due to cost barriers, online CRS and NAI webinars that are offered for free from the ASFM website could be utilized.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	FEMA maps and GIS
What are the barriers to running an effective NFIP program in the community, if any?	Lack of staff, training, and funding sources
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	April 27, 2016
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> <li>What is the date that your flood damage prevention ordinance was last amended?</li> </ul>	Zoning Section 8.13
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, site plan review



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

### 9.6.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.6-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.6-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	8	N/A	7	N/A	6	N/A	7	N/A	14	N/A	7	N/A
Multi-Family	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	2	N/A	3	N/A	0	N/A	1	N/A	4	N/A	1	N/A
Total New Construction Permits Issued	10	N/A	10	N/A	6	N/A	8	N/A	18	N/A	8	N/A
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated												

SFHA Special Flood Hazard Area (1% flood event)

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

Note: Information on permits within the SFHA was unavailable for this planning process.

### 9.6.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Horicon's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using



mapping techniques and technologies and for which the Town of Horicon has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.

DRAFT





Figure 9.6-1. Town of Horicon Flood Hazard Area Extent and Location Map

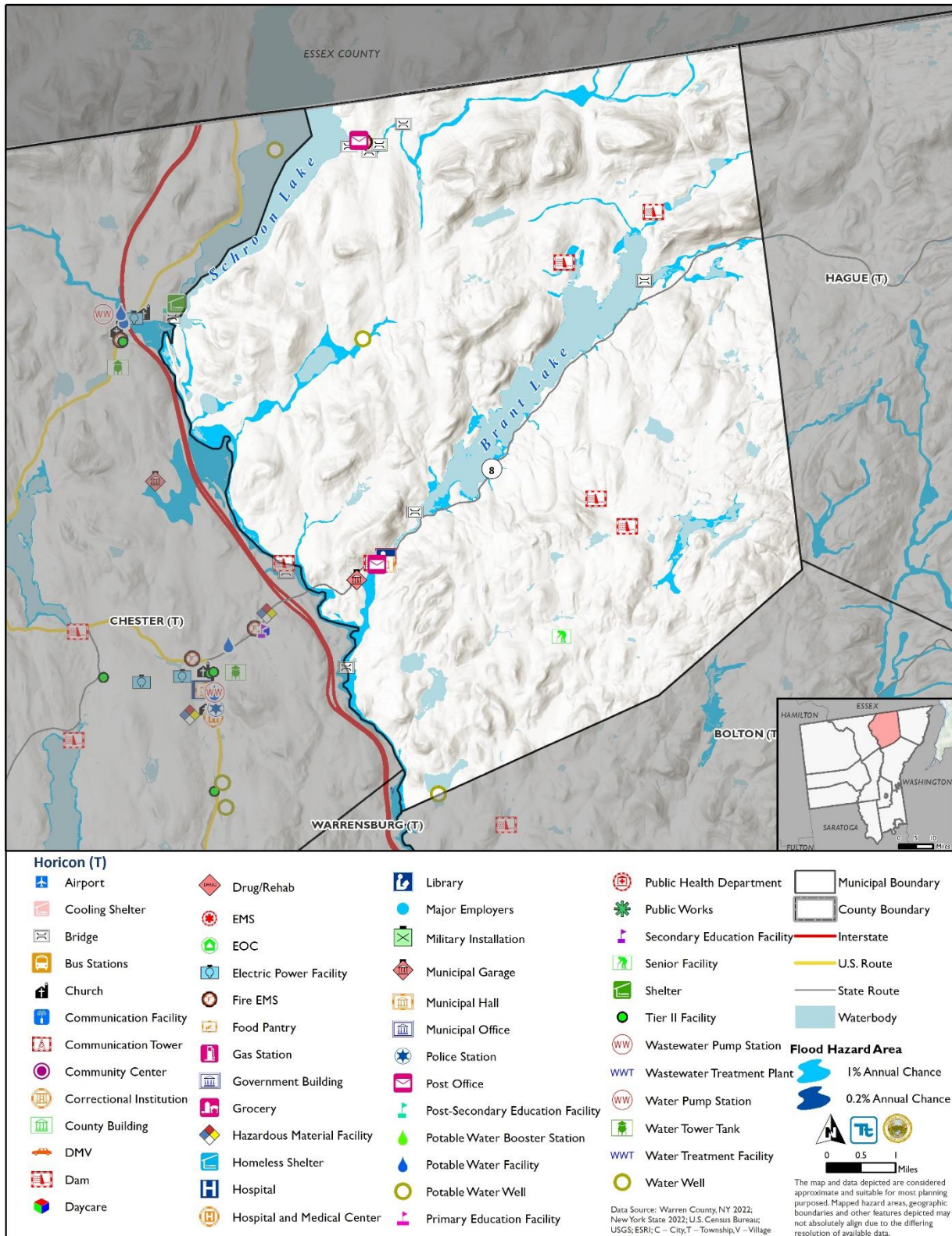




Figure 9.6-2. Town of Horicon Earthquake (Soil Class) Hazard Area Extent and Location Map

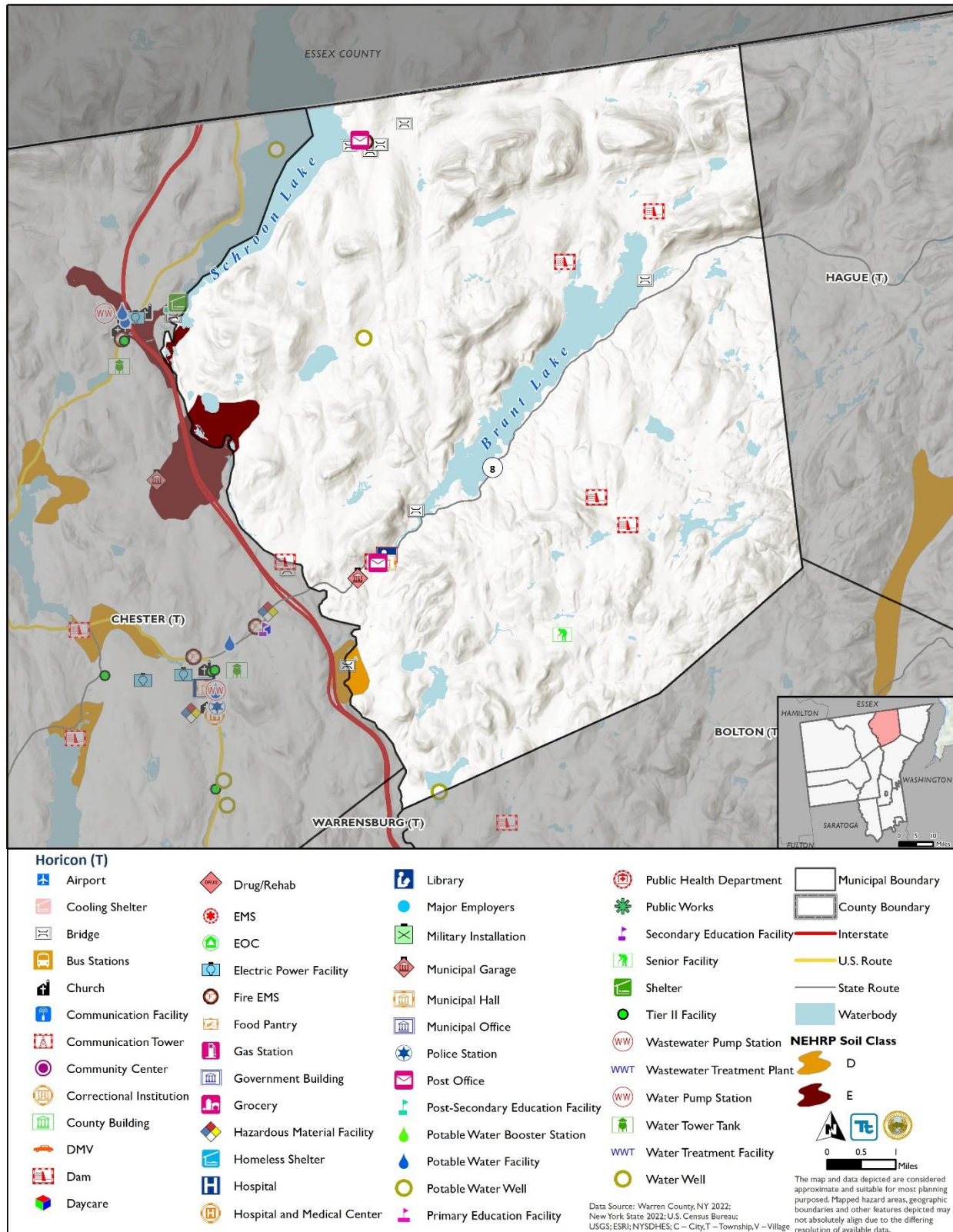
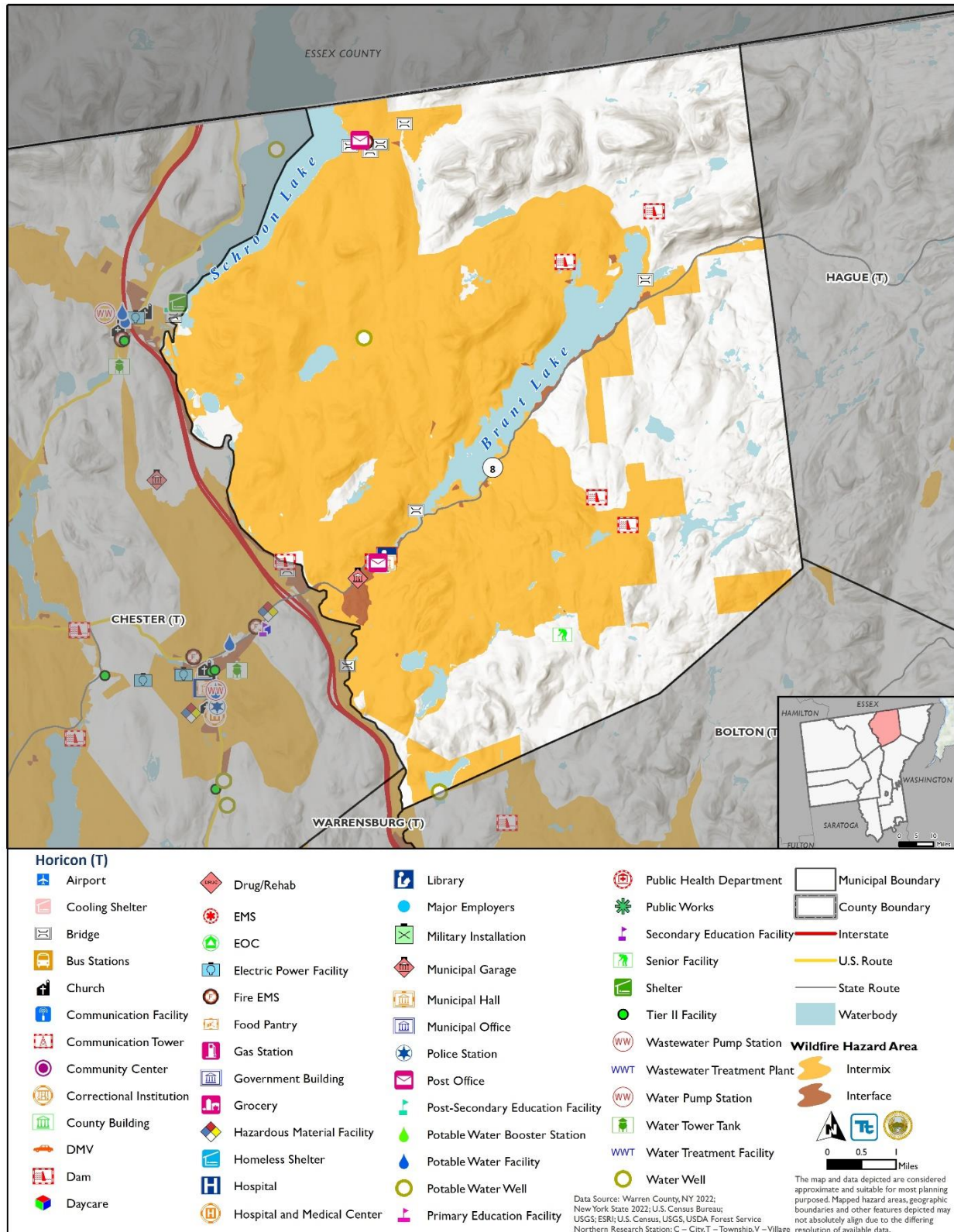






Figure 9.6-3. Town of Horicon Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume 1, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Horicon's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.6-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.6-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31–November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) Halloween Storm	Yes	Severe storm, straight line winds, and flooding	Roughly \$7,000 in materials and \$4,500 in staff time.
January 20, 2022	Covid-19 pandemic (DR-4480/EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19.	The Town was subject to closures and masking/social distancing requirements.
April 18–19, 2022	Severe Winter Storm	N/A	8–11 inches of snow. Due to weight of snow, many trees, branches and power lines fell. 16,000 county residents were without power. Roads blocked made it difficult to plow the snow.	Although the County was impacted, the Town did not report substantial damages.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Horicon's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the



economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Horicon. The Town of Horicon reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town agreed with the calculated hazard rankings.

**Table 9.6-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Low	High	High	Low	Medium

Dam Failure	Disease Outbreak
Medium	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.


**Table 9.6-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Clear Brook Dam	Dam	X	X	-	No inadequacies noted. The dam is assumed to be protected to the 0.2% flood level.
Starbuckville Dam	Dam	X	X	-	Maintained by separate commission. No inadequacies noted. The dam is assumed to be protected to the 0.2% flood level.
Brant Lake Lower Dam	Dam	X	X	-	No inadequacies noted. The dam is assumed to be protected to the 0.2% flood level.
Brant Lake Upper Dam	Dam	X	X	2023-Town of Horicon-002	-
Brant Lake Pedestrian	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
Market Street	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
South Horicon	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
Starbuckville	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
Valentine Mill	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
Blair Cross	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
					protected to the 0.2% flood level.
Johnson Road	Bridge	X	X	-	No inadequacies noted. The bridge is assumed to be protected to the 0.2% flood level.
Horicon Free Library	Library	X	X	-	The facility is slightly elevated and is assumed to be protected to the 0.2% flood level
Brant Lake Post Office	Post Office	X	X	-	The facility is slightly elevated and is assumed to be protected to the 0.2% flood level.

Source: Warren 2022

## Identified Issues

After review of the Town of Horicon's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Horicon identified the following vulnerabilities within their community:

- The culvert on Alder Brook Road is undersized and corroded. The culvert fails to meet the 1.25X active stream channel width for Alder Brook that feeds into the Schroon River. Historically, flooding has closed the roadway 1-2 times per year. When flooded, there are residences, season camps, and farms that have reduced access.

The current structure has completely corroded in the bottom and takes a significant amount of flow. During high storm events, the crossing causes streambed materials to build up and inhibit the natural flow of the watercourse. This along with beaver activity results in inadequate flow conditions and inhibits aquatic passability. Alder Brook has a C(T) stream classification and outlets into the Schroon River. Sedimentation in these waterbodies can impact the drinking water supply.

The Town has secured \$30,000 for planning through the NYS DEC Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant. Due to the elevation of the surrounding terrain, it is not feasible to upsize the existing culvert.

- Brant Lake has experienced high water levels due to lack of a lake level control system. High water levels have caused access issues to docks and marinas. Continued high water events could stress the dam and increase the risk of failure.





- Additional education of the public is needed so property owners are aware of risks and ways to protect their property.
- Residents with limited ability to access emergency notifications, prepare for, or evacuate when necessary require additional assistance before, during, and after hazard events.
- The Town's Floodplain Administrator requires additional training to increase capabilities.
- The Town lacks a Town specific emergency plan and currently relies on the County plan.
- Ernest Smith one lane temporary bridge. It is the only access for residents living on Ernest Smith Road.
- The Town has limited ability to communicate in real time with residents during emergency situations or to notify residents of an impending emergency.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.

### 9.6.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



**Table 9.6-15. Status of Previous Mitigation Actions**

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in the 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
THO-1	Secure funding and complete culvert replacement and road elevation for Alder Brook Road. All mitigation efforts shall be made in consideration of Federal and State directives to mitigate critical infrastructure to address protection to the 500-year flood event or "worst damage scenario".	Flood, Severe Storm		Town Supervisor, Highway Department, SWCD	No Progress			1. Include in 2023 HMP 2. 3.
THO-2	Install lake level control system and other surface improvements at Upper Brant Lake Dam. All mitigation efforts shall be made in consideration of Federal and State directives to mitigate critical infrastructure to address protection to the	Dam Failure, Flood, Severe Storm		Town Supervisor, Highway Department, SWCD	No Progress			1. Include in 2023 HMP 2. 3.





Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in the 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
	500-year flood event or "worst damage scenario".							
THO-3	Integrate the risk assessment and recommendations of the hazard mitigation plan into the comprehensive plan and community development plan.	All Hazards		Planning Board	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
THO-4	Educate residents at a public meeting regarding steps to be taken to decrease the impact of natural hazards by developing, enhancing, and disseminating educational material informing groups about ways to reduce risk.	All Hazards		Town Supervisor, Planning Board, school districts; County Office of Emergency Services	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
THO-5	Work with the Highway Department to monitor and remove trees/limbs in storm areas that	Severe Storm, Severe Winter Storm		Town DPW, Highway Department	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided;		



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in the 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success		
	present potential hazards to keep trees from threatening lives, property, and public infrastructure during storm events. Seek additional funding as available.							
THO-6	Design a network of citizens that will check in on elderly, functional needs, and low-income individuals during major events.	All Hazards		Planning Board, Town Supervisor	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
THO-7	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections.	Flood		Town Supervisor, Planning Board	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.6–15, the Town of Horicon identified the following mitigation efforts completed since the last HMP:

- None identified

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Horicon participated in a mitigation action workshop in August 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.6-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X			X	X	X	X			X
Flood	X	X	X	X	X	X	X	X	X	X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X		X	X	X	X			X
Wildfire	X			X	X	X	X			X
Infestation	X			X	X	X	X			X
Dam Failure	X			X	X	X	X			X
Disease Outbreak	X			X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.6–17).

The table below summarizes the specific mitigation initiatives the Town of Horicon would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.6-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Horicon-001	Alder Brook Road	1, 3, 5	Severe Storm, Flood	<b>Problem:</b> The culvert on Alder Brook Road is undersized and corroded. The culvert fails to meet the 1.25X active stream channel width for Alder Brook that feeds into the Schroon River. Historically, flooding has closed the roadway 1-2 times per year. When flooded, there are residences, season camps, and farms that have reduced access. The current structure has completely	None	May require permitting	Within 5 years	Town Supervisor, Highway Department, SWCD	\$30,000 for planning, High for structural improvements	Reduced occurrence of flooding, flood damages at Alder Brook Road. Improve fish and wildlife populations and reduce sedimentation to improve public drinking water source.	NYS DEC NPG grant program secured for planning; HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP, NSP	SP, NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				corroded in the bottom and takes a significant amount of flow. During high storm events, the crossing causes streambed materials to build up and inhibit the natural flow of the watercourse. This along with beaver activity results in inadequate flow conditions and inhibits aquatic passability. Alder Brook has a C(T) stream classification and outlets into the Schroon River.										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>Sedimentation in these waterbodies can impact the drinking water supply. The Town has secured \$30,000 for planning through the NYS DEC Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant. Due to the elevation of the surrounding terrain, it is not feasible to upsize the existing culvert.</p> <p><b>Solution:</b> Following planning and design, the Town will secure funding and</p>										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				complete culvert replacement with an 18" arch culvert and elevation of 300' of roadway for Alder Brook Road. The proposed structure will be designed to meet the active channel width sizing requirements and will allow for aquatic passability. All mitigation efforts shall be made in consideration of Federal and State directives to mitigate critical infrastructure to address protection to the 500-year										





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				flood event or "worst damage scenario".										
2023-Town of Horicon-002	Upper Brant Lake Dam	1	Severe Storm, Flood	<p><b>Problem:</b> Brant Lake has experienced high water levels due to lack of a lake level control system. High water levels have caused access issues to docks and marinas. Continued high water events could stress the dam and increase the risk of failure.</p> <p><b>Solution:</b> The Town will install a lake level control system and other surface improvements at Upper Brant Lake</p>	Yes	May require permitting	Within 5 years	Town Supervisor, Highway Department, SWCD	High	Reduction in risk of dam failure	HMGP, BRIC, PDM, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Dam. All mitigation efforts shall be made in consideration of Federal and State directives to mitigate critical infrastructure to address protection to the 500-year flood event or "worst damage scenario".										
2023-Town of Horicon-003	Public Information Meeting	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure	<b>Problem:</b> Additional education of the public is needed so property owners are aware of risks and ways to protect their property. <b>Solution:</b> The Town will educate residents at public	No	None	1 year	Town Supervisor, Planning Board, SWCD, school districts; County Office of Emergency Services	Staff time	Increased public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				meetings regarding steps to be taken to decrease the impact of natural hazards by developing, enhancing, and disseminating educational material informing groups about ways to reduce risk.										
2023-Town of Horicon-004	Special Needs Assistance Network	2, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure, Disease Outbreak	<b>Problem:</b> Residents with limited ability to access emergency notifications, prepare for, or evacuate when necessary require additional assistance before, during, and after	No	None	2 years	Planning Board, Town Supervisor	Low	Better social network and support system for hazard response	Town budget	High	EAP	PI, ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				hazard events. <b>Solution:</b> The Town will design a network of citizens that will check in on elderly, functional needs, and low-income individuals during major events.										
2023-Town of Horicon -005	FPA Training	4	Flood	<b>Problem:</b> The Town's Floodplain Administrator requires additional training to increase capabilities. <b>Solution:</b> The Town will send the FPA to training available from NYS and FEMA, potentially exploring certified	No	None	2 years	FPA	Staff time	Increase floodplain administration capabilities	Town budget	High	LPR	PR, PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				floodplain manager training.										
2023-Town of Horicon -006	Emergency Plan	3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Town lacks a Town specific emergency plan and currently relies on the County plan. <b>Solution:</b> The Town will develop a Town specific emergency plan and work with Warren County to ensure integration between the two plans.	No	None	Within 5 years	Administration, Warren County	Medium	Improved emergency planning	Town budget	High	LPR	ES
2023-Town of Horicon -007	Ernst Smith Road Bridge	1, 3	Earthquake, Flood, Severe Storm, Severe Winter Storm	<b>Problem:</b> Ernest Smith one lane temporary bridge. It is the only access for residents living on Ernest Smith Road.	Yes	May require permitting	Within 5 years	Highway Department	High	Access maintained for residents on Ernest Smith Road.	HMGP, BRIC, PDM, Town budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will replace the temporary bridge with a permanent bridge, designed to withstand a 500-year flood event.										
2023-Town of Horicon-008	Promote Warren County Emergency Notification System	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Town has limited ability to communicate in real time with residents during emergency situations or to notify residents of an impending emergency. <b>Solution:</b> The Town will conduct an outreach campaign to encourage all residents to register for Warren	No	None	1 year	Administration	Low	Increased emergency communication capabilities	Town budget	High	EAP	PI, ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				County's emergency notification application.										
2023-Town of Horicon-009	Substantial Damage Procedures	4	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<p><b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.</p> <p><b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determination for earthquake,</p>	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal budget	High	LPR	PP, PR





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				flood, severe storm, severe winter storm, wildfire, and dam failure hazard events..										

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

**Acronyms and Abbreviations:**

CAV Community Assistance Visit

CRS Community Rating System

DPW Department of Public Works

EHP Environmental Planning and Historic Preservation

FEMA Federal Emergency Management Agency

FPA Floodplain Administrator

HMA Hazard Mitigation Assistance

N/A Not applicable

NFIP National Flood Insurance Program

OEM Office of Emergency Management

**Potential FEMA HMA Funding Sources:**

FMA Flood Mitigation Assistance Grant Program

HMGP Hazard Mitigation Grant Program

BRIC Building Resilient Infrastructure and Communities Program

**Timeline:**

The time required for completion of the project upon implementation.

**Cost:**

The estimated cost for implementation.

**Benefits:**

A description of the estimated benefits, either quantitative and/or qualitative.

**Critical Facility:**

Yes Critical Facility located in 1% floodplain

**Mitigation Category:**

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**



- *Preventative Measures (PR)*—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)*—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)*—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)*—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.6-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Horicon-001	Alder Brook Road	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Horicon-002	Upper Brant Lake Dam	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Horicon-003	Public Information Meeting	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Horicon-004	Special Needs Assistance Network	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Horicon-005	FPA Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Horicon-006	Emergency Plan	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Horicon-007	Ernst Smith Road Bridge	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2023-Town of Horicon-008	Promote Warren County Emergency Notification System	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Horicon-009	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.6.8 Action Worksheets

The following action worksheets were developed by the Town of Horicon to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Alder Brook Road		
<b>Project Number:</b>	2023-Town of Horicon-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	<p>The culvert on Alder Brook Road is undersized and corroded. The culvert fails to meet the 1.25X active stream channel width for Alder Brook that feeds into the Schroon River. Historically, flooding has closed the roadway 1-2 times per year. When flooded, there are residences, season camps, and farms that have reduced access.</p> <p>The current structure has completely corroded in the bottom and takes a significant amount of flow. During high storm events, the crossing causes streambed materials to build up and inhibit the natural flow of the watercourse. This along with beaver activity results in inadequate flow conditions and inhibits aquatic passability. Alder Brook has a C(T) stream classification and outlets into the Schroon River. Sedimentation in these waterbodies can impact the drinking water supply.</p> <p>The Town has secured \$30,000 for planning through the NYS DEC Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant. Due to the elevation of the surrounding terrain, it is not feasible to upsize the existing culvert.</p>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Following planning and design, the Town will secure funding and complete culvert replacement with an 18" arch culvert and elevation of 300' of roadway for Alder Brook Road. The proposed structure will be designed to meet the active channel width sizing requirements and will allow for aquatic passability. All mitigation efforts shall be made in consideration of Federal and State directives to mitigate critical infrastructure to address protection to the 500-year flood event or "worst damage scenario".		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	protection to the 500-year flood event or "worst damage scenario".	<b>Estimated Benefits (losses avoided):</b>	Reduced occurrence of flooding, flood damages at Alder Brook Road. Improve fish and wildlife populations and reduce sedimentation to improve public drinking water source.
<b>Useful Life:</b>	75 years	<b>Goals Met:</b>	1, 3, 5
<b>Estimated Cost:</b>	\$30,000 for planning, High for structural improvements	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	3 years	<b>Potential Funding Sources:</b>	NYS DEC NPG grant program secured for planning; HMGP, BRIC, PDM, CHIPS, Town budget
<b>Responsible Organization:</b>	Town Supervisor, Highway Department, SWCD	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove road	N/A	Roadway cannot be removed as access will be lost



	Relocate road to another location	Very high	Costly
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
<b>Project Name:</b>	Alder Brook Road	
<b>Project Number:</b>	2023-Town of Horicon-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will improve drinking water source, improve emergency access on Alder Brook Road.
<b>Property Protection</b>	1	Project will protect roadway from flooding, reduce culvert damages.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible.
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	Project will reduce sedimentation in the waterway to improve aquatic habitat.
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Storm, Flood
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Town Supervisor, Highway Department, SWCD
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





## SECTION 9.

### 9.7 TOWN OF JOHNSBURG

This section presents the jurisdictional annex for the Town of Johnsburg that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Johnsburg's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.7.1 Hazard Mitigation Planning Team

The Town of Johnsburg identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including Highway Department, Bookkeeper and Safety Officer. The Bookkeeper, Highway Superintendent, Safety Officer, and Assistant Highway Superintendent represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.7-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Danae Tucker – Bookkeeper Address: 219 Main Street, North Creek, NY 12853 Phone Number: 518-251-2421 x8 Email: <a href="mailto:bookkeeper@johnsburgny.com">bookkeeper@johnsburgny.com</a>	Name/Title: Fred Comstock – Highway Superintendent Address: 88 Ski Bowl Road, North Creek, NY 12853 Phone Number: 518-251-2113 Email: <a href="mailto:hwy1@johnsburgny.com">hwy1@johnsburgny.com</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: Colin Mangan Address: 219 Main Street, North Creek, NY 12853 Phone Number: 518-251-2421 x8 Email: <a href="mailto:bookkeeper@johnsburgny.com">bookkeeper@johnsburgny.com</a>	
<b>Additional Contributors</b>	
Name/Title: Ernie Dunkley – Safety Officer	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: provided data and information on capabilities, NFIP administration, statuses of previous actions. Provided input on hazard rankings and contributed to mitigation strategy.	
Name/Title: Mike Dunkley – Deputy Highway Superintendent	
Method of Participation: provided data and information	
Name/Title: Colin Mangan – Zoning Enforcement Officer	
Method of Participation: Provided permit information	

## 9.7.2 Municipal Profile

The Town of Johnsbury is in the northwest corner of Warren County. It is part of the Glens Falls Metropolitan Statistical Area. The Town borders Hamilton County on the north and west and the Hudson River on the east. The Town includes seven hamlets: Bakers Mills, Garnet Lake, Johnsbury, North Creek, Riparius, Sodom and Wevertown. Bodies of water include the Hudson River and Garnet Lake. U.S. Route 8 passes through the Town.

According to the U.S. Census, the 2020 population for the Town of Johnsbury was 2,143, a 10.5 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 4.0 percent of the population is 5 years of age or younger and 27.3 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Johnsbury has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 6.82% of the population does not have a high school diploma
- 17.74% of the population has a disability
- 7.69% of households do not have a vehicle
- 4.68% of the population is living below the poverty level
- 1.71% of the population is unemployed

## 9.7.3 Jurisdictional Capability Assessment and Integration

The Town of Johnsbury performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.



For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Johnsbury to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Johnsbury. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.7-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Building Uniform Code	State and Local	Building Department, Warren County Fire Prevention and Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> All applicants for a building permit must be issued a Site Plan Compliance letter by the Town Zoning Enforcement Officer before the County will issue Certificate of Occupancy. The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code				
<b>Zoning/Land Use Code</b>	Yes	Local Law #1 – Zoning Law 2008	Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The overall purpose of this Ordinance is to promote the health, safety, and general welfare by regulating the density of population; and the location, intensity and use of buildings, structures and land; for trade, residence, recreation or other purposes.				
<b>Subdivision Ordinance</b>	Yes	Local Law #2 – Subdivision	Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Any division of land into two or more lots, parcels or sites, whether adjoining or not, for the purpose of sale, lease, license or any form of separate ownership or occupancy by any person is required to include a map, plat or other plan for subdivision if not previously filed.				
<b>Site Plan Ordinance</b>	Yes	Land Use Planning Fee Structures	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Site Plan Review fees range depending on square foot of buildings.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Stormwater Management Ordinance</b>	No	-	-	-
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	-	-	-
<b>Flood Damage Prevention Ordinance</b>	Yes	Town of Johnsbury Flood Damage Protection Law – 1987	Federal, State, Local	Zoning Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this local law to promote the health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed: <ul style="list-style-type: none"><li>• To protect human life and health;</li><li>• To minimize expenditure of public money for costly flood control projects;</li><li>• To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li><li>• To minimize prolonged business interruptions;</li><li>• To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, and sewer line, and streets and bridges located in areas of special flood hazard;</li><li>• To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;</li><li>• To insure that potential buyers are notified that property is in an area of special flood hazard; and</li><li>• To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li></ul> The ordinance requires update to meet state requirements for two feet of freeboard.				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Other	No	-	-	-
<b>Planning Documents</b>				
Comprehensive Plan	Yes	Town of Johnsburg Comprehensive Plan	Local	Zoning and Planning
How has or will this be integrated with the HMP and how does this reduce risk? The Comprehensive Plan is the guiding requirement for growth, development and preservation throughout the Town. The Plan identifies the Town current environmental resources and community infrastructure, examines current land use patterns and analyzes current and future growth trends.				
Capital Improvement Plan	No	-	-	-
Disaster Debris Management Plan	No	-	-	-
Floodplain Management or Watershed Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	No	-	-	-
Urban Water Management Plan	No	-	-	-
Habitat Conservation Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Community Wildfire Protection Plan	No	-	-	-
Community Forest Management Plan	No	-	-	-
Transportation Plan	No	-	-	-
Agriculture Plan	No	-	-	-
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	County	Warren County OES
How has or will this be integrated with the HMP and how does this reduce risk? The County Comprehensive Emergency Management Plan (CEMP) enhances the County's ability to manage emergency/disaster situations. The Plan outlines a comprehensive approach to risk reduction before a disaster or emergency and identifies short and long-term recovery goals.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<b>Public Health Plan</b>	No	-	-	-
<b>Other</b>	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Johnsburg to oversee and track development.

**Table 9.7-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"> <li>If you issue development permits, what department is responsible?</li> </ul>	N/A	Zoning Officer
<ul style="list-style-type: none"> <li>If you do not issue development permits, what is your process for tracking new development?</li> </ul>	N/A	-



Indicate if your jurisdiction implements the following	Yes/No	Comment:
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	25 % of the parcels in the municipality are vacant.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Johnsburg and their current responsibilities that contribute to hazard mitigation.

**Table 9.7-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board is responsible for site plan application review, site plan approval, and subdivision application review and approval.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals is responsible for reviewing and approving, approving with conditions all variance applications. The Zoning Enforcement Officer has the final approval of permits.
Planning Department	Yes	Planning / Zoning Board
Mitigation Planning Committee	Yes	Olasheski / Arsenault
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Arnheirt / Arsenault
Public Works/Highway Department	Yes	The Highways Department maintains 94 miles of Town roads, only a quarter of which have paved surfaces.
Construction/Building/Code Enforcement Department	Yes	Zoning Officer
Emergency Management/Public Safety Department	Yes	New Safety Officer and Program
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	The Town is exploring developing a warning system that can be run through the web page developer. Town Board will have to vote on the extra expense.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Dept. ditching / cutting shoulders / cutting down hazardous trees
Mutual aid agreements	Yes	Local Fire Department and EMS Response
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	New Safety Officer working with Town Board to set up programs and job description to follow.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other	Yes	Town has implemented a safety program that is growing. Safety officer is working with the Town on risk management and coordination.
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Adirondack Park Agency (APA) and Clough H. Harbor Associates as needed on contractual basis.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Adirondack Park Agency (APA) and Clough H. Harbor Associates as needed on contractual basis.
Planners or engineers with an understanding of natural hazards	Yes	Zoning Enforcement Officer, Adirondack Park Agency (APA) and Clough H. Harbor Associates as needed on contractual basis.
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Town Safety Officer
Grant writer(s)	Yes	Olisheski / Nestle
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

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

**Table 9.7-5. Fiscal Capabilities**

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



## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Johnsburg.

**Table 9.7-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	North Shore Solutions
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Facebook Page
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	Building a possible solution in town web page. Have to bring the plan in front of town board
Natural disaster/safety programs in place for schools	No	School has emergency procedures
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	Looking into programs such as a phone app, Sign on Town Hall, and town web site. All have never been done before and will have to be adopted by the town board as soon as completed.

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Johnsburg.

**Table 9.7-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Unknown	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	(Webster County participates)	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable



## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.7-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Weak
Extreme Temperature	Weak
Flood	Weak
Severe Storm	Weak
Severe Winter Storm	Weak
Wildfire	Weak
Infestation	Weak
Dam Failure	Weak
Disease Outbreak	Moderate

### 9.7.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

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

The following table summarizes the NFIP statistics for the Town of Johnsbury.

**Table 9.7-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Johnsbury	7	4	\$56,870	0	1	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.



*RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.*

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Johnsburg.

**Table 9.7-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Areas around creeks are prone to flooding. Yes, the Town maintains a list.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	No property owners have expressed interest in mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	The Town Floodplain Administrator makes substantial damage estimates in conjunction with FEMA for publicly owned infrastructure.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	Unknown
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	Yes. But with beavers changing locations and weather changes some places are in risk of flooding
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Zoning Officer
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	The Floodplain Administrator attends continuing education and/or certification training. Due to cost barriers, online CRS and NAI webinars that are offered for free from the ASFM website could be utilized.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.



NFIP Topic	Comments
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Zoning Officer
What are the barriers to running an effective NFIP program in the community, if any?	Lack of funding
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"><li>If so, state the violations.</li></ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAV: April 28, 2015
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"><li>What is the date that your flood damage prevention ordinance was last amended?</li></ul>	Local Law #1, Year 1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"><li>If exceeds, in what ways?</li></ul>	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Planning and Zoning Board considers efforts to reduce flood risk when reviewing development applications
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Town has not considered joining the CRS program.

### 9.7.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern.



Table 9.7-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

DRAFT

**Table 9.7-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	1	0	8	1	10	0	10	0	13	0	11	0
Multi-Family	0	0	0	0	0	0	0	0	3	0	2	0
Other (commercial, mixed-use, etc.)	0	0	7	0	3	0	6	0	9	0	12	0
Total New Construction Permits Issued	1	0	15	1	13	0	16	0	25	0	25	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated												

SFHA Special Flood Hazard Area (1% flood event)

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

## 9.7.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Johnsbury's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Johnsbury has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.





Figure 9.7-1. Town of Johnsburg Flood Hazard Area Extent and Location Map

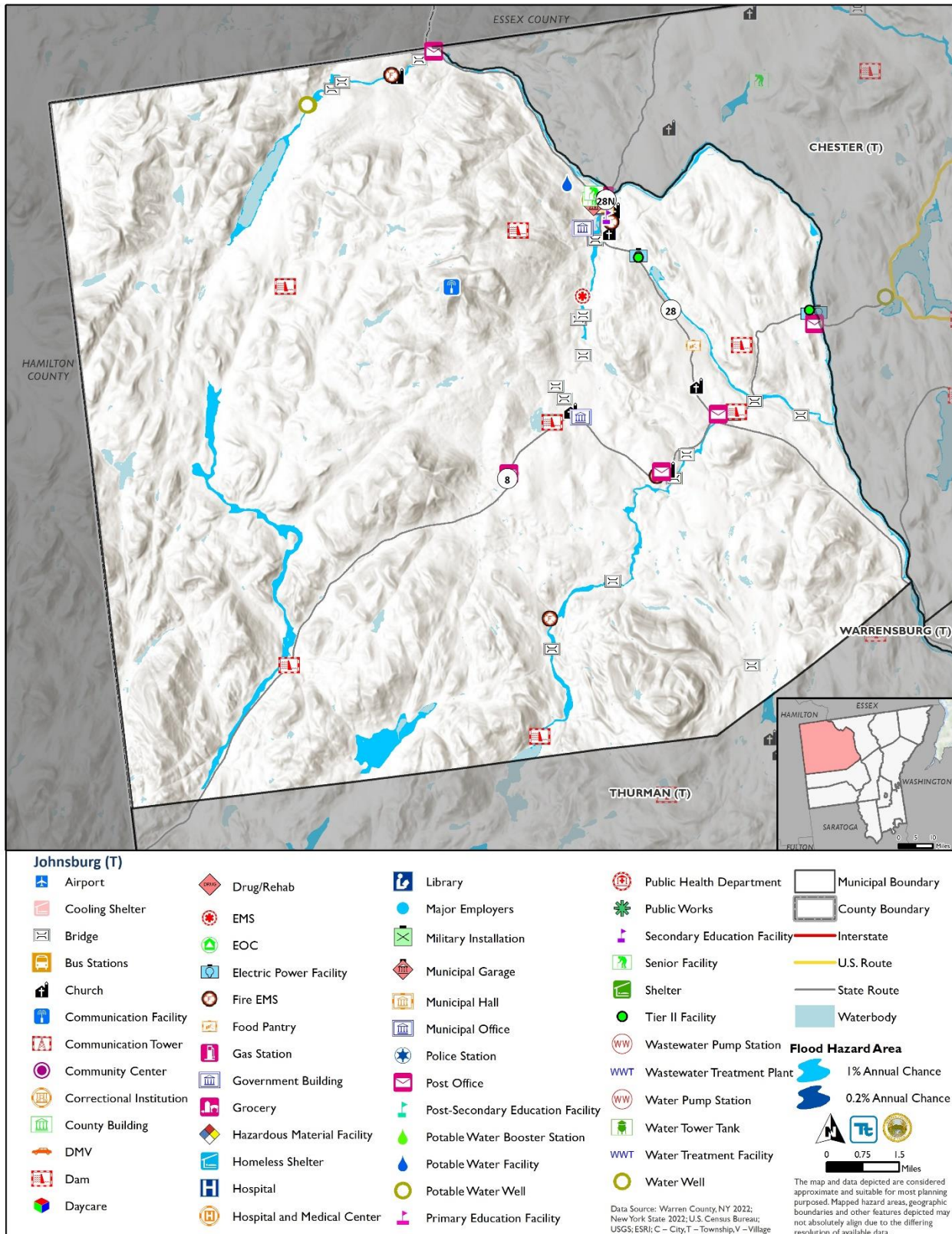




Figure 9.7-2. Town of Johnsburg Earthquake (Soil Class) Hazard Area Extent and Location Map

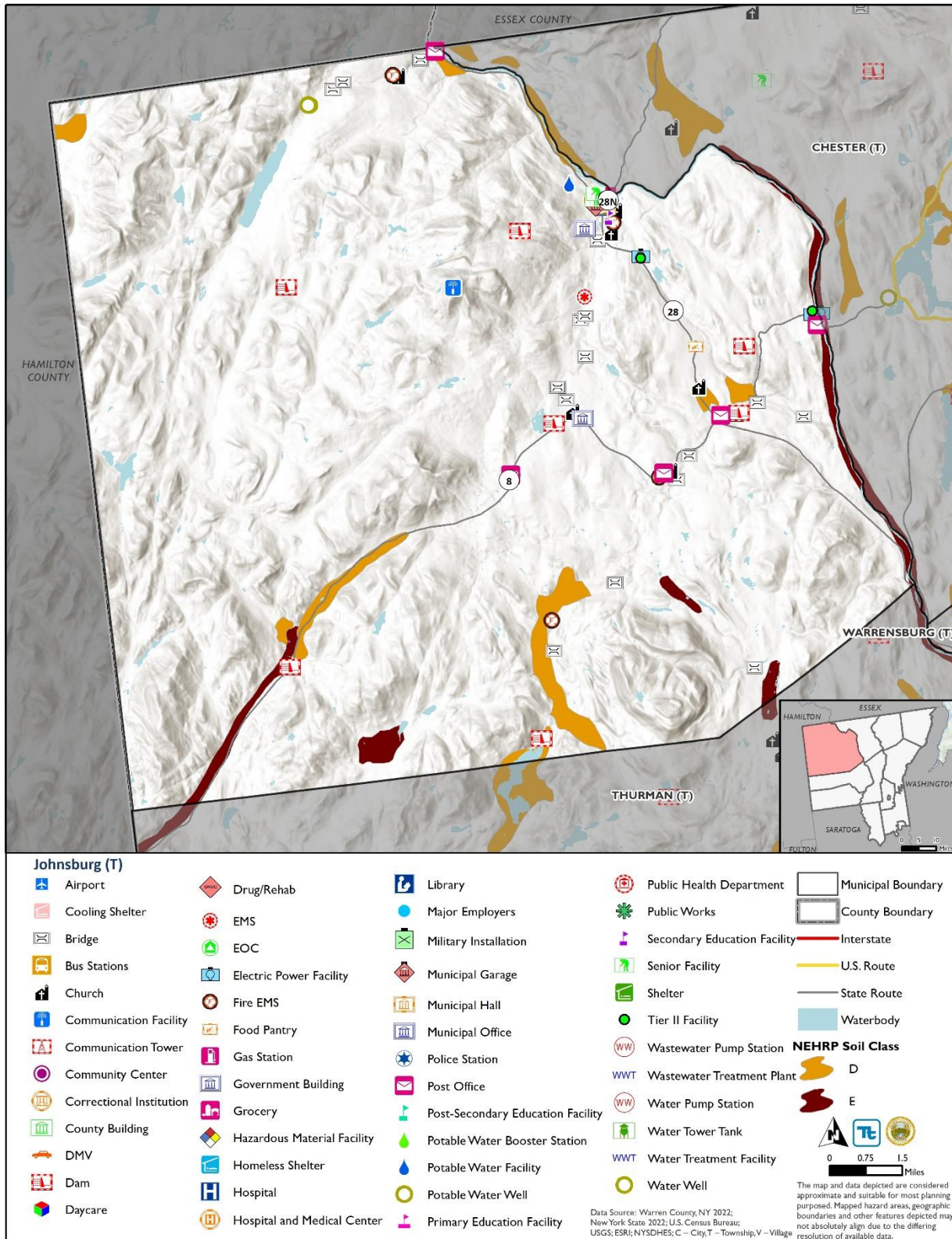
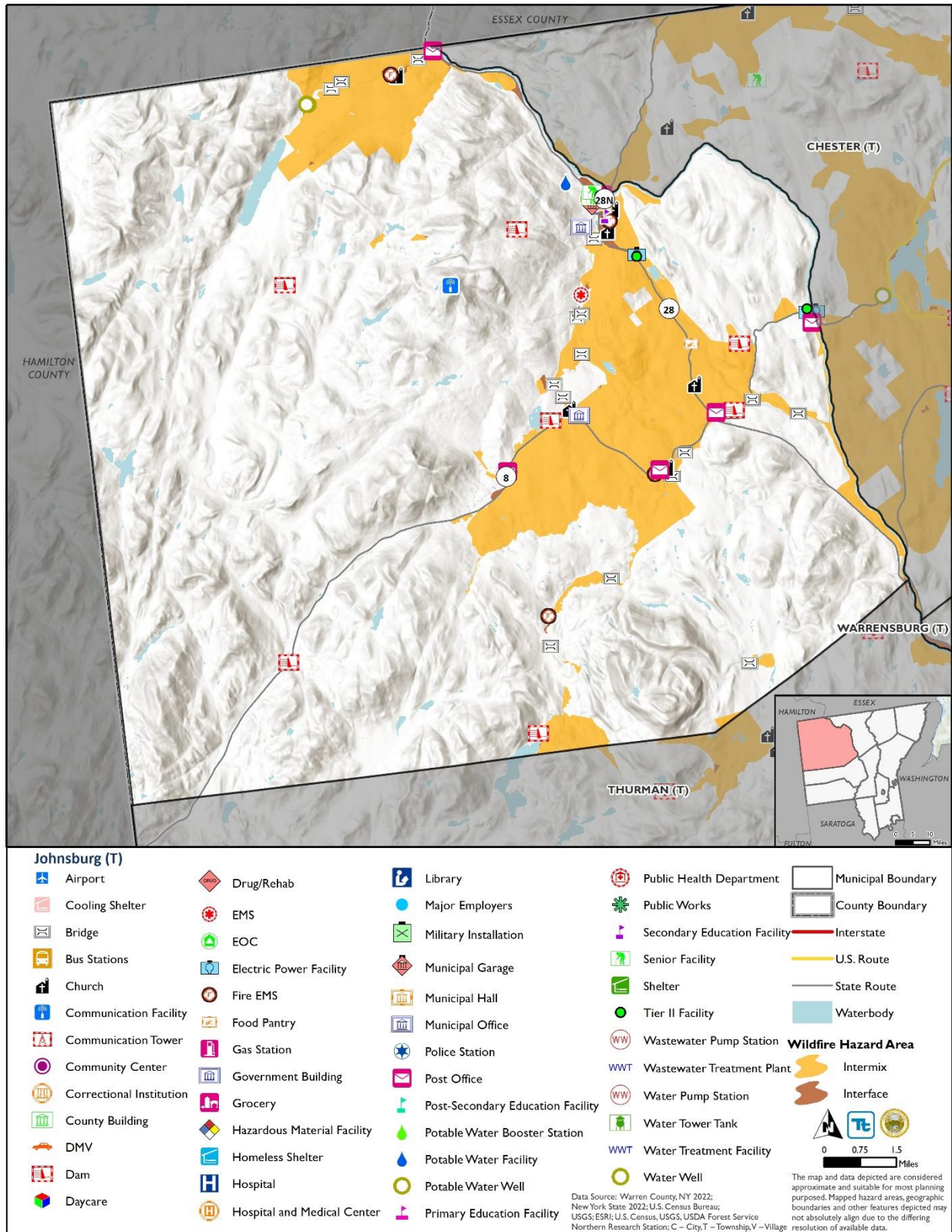






Figure 9.7 3. Town of Johnsburg Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume 1, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Johnsbury's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.7-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.7-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31 2019	Halloween Storm: Severe Storms, Straight-line winds, Flooding (DR-4472)	Yes	Severe storm, straight line winds, and flooding	Flooding, tree damage, roads washed out, power lines down.
April 19, 2022	Wet Snow	No	Heavy snow	Trees down, power out, Impassable roads.
January 20, 2022	Covid-19 pandemic (DR-4480/EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19.	The Town was subject to closures and masking/social distancing requirements.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Johnsbury's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.



As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Johnsbury. The Town of Johnsbury reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town changed the hazard ranking for flood from low to medium, noting that dam failure risk (high) would contribute to flood risk.
- The Town changed the hazard ranking for wildfire from low to medium, noting an increase in wildfire occurrence.
- The Town agreed with the remainder of the calculated hazard rankings.

**Table 9.7-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Medium	High	High	Medium	Medium

Dam Failure	Disease Outbreak
High	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.7-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Murphy Saw Mill Dam	Dam	X	X	N/A	This is a privately owned low hazard irrigation dam and as such will not be designed to the 0.2-percent flood level.
Millwood	Bridge	X	X	2023–Town of Johnsburg-010	–
Heath Road	Bridge	X	X	2023–Town of Johnsburg-010	–
Dillon Hill	Bridge	X	X	2023–Town of Johnsburg-010	–
Peaceful Valley Valhaus	Bridge	X	X	2023–Town of Johnsburg-010	–
Main Street	Bridge	X	X	2023–Town of Johnsburg-010	–
Spikehorn	Bridge	X	X	2023–Town of Johnsburg-010	–
Smith	Bridge	X	X	2023–Town of Johnsburg-010	–
Claude Straight	Bridge	X	X	2023–Town of Johnsburg-010	–
Harrington	Bridge	X	X	2023–Town of Johnsburg-010	–
South Johnsburg Pipearch	Bridge	X	X	2023–Town of Johnsburg-010	–
Hudson Street	Bridge	X	X	2023–Town of Johnsburg-010	–
Crane Mountain	Bridge	X	X	2023–Town of Johnsburg-010	–

Source: Warren County 2022

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in or could impact the Town of Johnsburg:

- Garnet Lake Dam

### Identified Issues

After review of the Town of Johnsburg's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Johnsburg identified the following vulnerabilities within their community:

- The Comprehensive Plan is the guiding requirement for growth, development and preservation throughout the Town. The Plan requires update to better integrate hazard mitigation concepts.





- Beaver dams contribute to flooding during big storm events due to overflow or release. Dams are identified at Riverside Station Road, Coulter Road, Crane Mt, Hudson Street, Bateman, Goodman Sodom, and the Town Park.
- Critical facilities require backup power to maintain essential functions during and after disaster events. Numerous critical facilities in the Town lack backup power.
- The Town is interested in increasing outreach surrounding hazard mitigation.
- The Town lacks an emergency notification system.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- Culverts throughout the Town are aging, broken, and undersized.
- Dead or damaged trees pose a hazard as they can fall and block roadways or knock out power lines. This poses a wildfire risk as well.
- Only a quarter of roadways maintained by the Highway Department have paved surfaces. This has led to road washouts and bad ditch lines over time.
- Numerous bridges in the Town are anticipated to be at or near end of useful life.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.

### 9.7.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.





**Table 9.7-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
JB-1 (carryover)	Integrate the risk assessment and recommendations of the hazard mitigation plan into the comprehensive plan.	All Hazards		Planning Board	In Progress	Cost		<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
JB-2	Repair or retrofit low-lying bridges on Garnett Lake Road and Harvey Road.	Severe Storm, Flood		Town Board, Highway Dept.	Complete	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Garnett Lake road and Harvey road are completed</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
JB-3	Crown Riverside Station road to prevent debris buildup and ice formation.	Severe Storm, Flood		Town DPW, Planning Department	In Progress	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. River ice has not come close to the roadway. Looking into putting in a 5ft or 8ft squash pipe to control beaver dam overflow on big storms</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
JB-4	Notify and provide needed support to the facility managers/operators of those critical facilities located in the floodplain and evaluate the facility's flood	Flood, Severe Storm		Johnsburg Public Works, Planning Board	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						of Success		
	vulnerability and identify feasible mitigation options. Working from available data on critical facilities in the floodplain, the Town shall provide direct outreach to facility managers/operators of their vulnerability, and work to develop needed data to support vulnerability assessments performed by the County. Facility owners/operators shall be advised of opportunities to insure and mitigate their flood risks, and the Town shall assist (non-financial) with securing mitigation grant funding as available and appropriate.  Efforts to mitigate critical facilities shall recognize Federal and State directives for protection to the 500-year flood level or "worst case scenario".							<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
JB-5	Provide annual education and training for local Floodplain Administrator to ensure code enforcement and proper inspections.	Flood		Town Board	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2. Ongoing capability</li> <li>3. Ongoing capability</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		
		Flood			In Progress	Cost		<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> </ol>



## SECTION 9.7. Town of Johnsborg

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Level of Protection	Damages Avoided; Evidence of Success	
JB-6	Develop and implement a strategy to mitigate risk to public and property from beaver dam breaches along Coulter Road.			Planning Dept., NYSDEC, Private Property Owners Town Highway				<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
JB-7 (carryover)	Conduct education and outreach to residents and business owners to inform them if their properties are in known hazard areas, and actions they can take to protect those properties.	Earthquake, Flood		Town Clerk	Ongoing Capability	Cost		<ol style="list-style-type: none"> <li>1. Discontinue</li> <li>2.</li> <li>3. Ongoing capability</li> </ol>
JB-8	Purchase and install backup power generators for municipally-owned critical facilities, including Johnsborg Central School.	Earthquake, Severe Storm, Severe Winter Storm		Johnsborg Public Works, Central School District	In Progress	Cost		<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> <li>2. Highway / Parks / Town Hall</li> <li>3.</li> </ol>



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.7-15, the Town of Johnsbury identified the following mitigation efforts completed since the last HMP:

- None identified

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Johnsbury participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.7-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	XX			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X	X	X	X	X	X	X	X	X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X	X	X	X	X	X	X		X
Wildfire	X	X	X	X	X	X	X	X		X
Infestation	X	X	X	X	X	X	X	X		X
Dam Failure	X	X		X	X	X	X			X
Disease Outbreak	X	X		X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.7-17).

The table below summarizes the specific mitigation initiatives the Town of Johnsbury would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.7-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023–Town of Johnsbury-001	Comprehensive Plan Update	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Comprehensive Plan is the guiding requirement for growth, development and preservation throughout the Town. The Plan requires update to better integrate hazard mitigation concepts. <b>Solution:</b> The Town will integrate the risk assessment and recommendations of the hazard mitigation plan into the Comprehensive Plan.	No	None	Within 5 years	Planning Board	Low	Increased integration	Town budget	High	LPR	PR
2023–Town of Johnsbury-002	Beaver Dam Flood Risk Reduction	1, 5	Severe Storm, Flood	<b>Problem:</b> Beaver dams contribute to flooding during big storm events due to overflow or release. Dams are identified at Riverside Station	No	May require permitting	Within 5 years	Town DPW, Planning Department	High	Reduction in flooding	HMGP, BRIC, PDM, CHIPS, Town budget	High	NSP, SIP	NR, SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Road, Coulter Road, Crane Mt, Hudson Street, Bateman, Goodman Sodom, and the Town Park.  <b>Solution:</b> The Town will develop and implement a strategy to mitigate risk to public and property from beaver dams. This will include determining if putting in a 5ft or 8ft squash pipe to control beaver dam overflow on big storms is a cost effective solution. Cost effective solutions will be implemented.										
2023-Town of Johnsbury-003	Generators for Critical Facilities	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter	<b>Problem:</b> Critical facilities require backup power to maintain essential functions during and after disaster events. Numerous critical facilities in	Yes	None	Within 5 years	Engineer, Central School District, Highway Department, Parks Department	High; Estimated cost is \$6K per unit before installation.	Protect public health and safety, and ensure continued operation of critical	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Storm, Wildfire, Dam Failure	<p>the Town lack backup power.</p> <p><b>Solution:</b> The Town will purchase and install permanent fixed generators and necessary electrical components at the following facilities:</p> <ul style="list-style-type: none"><li>• Town Hall</li><li>• Johnsbury Central School</li><li>• Highway Department</li><li>• Parks Department</li><li>• Tannery Pond</li><li>• Weavertown Court House</li></ul> <p>It is assumed 20K generators will be needed for each facility. Following</p>						facility and essential functions during power outages.	County Management Performance Grants (EMPG) Program, Municipal Budget, School Budget			





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				installation, the Highway Department will be responsible for maintenance.										
2023-Town of Johnsbury-004	Hazard Mitigation Outreach	2	All hazards	<p><b>Problem:</b> The Town is interested in increasing outreach surrounding hazard mitigation.</p> <p><b>Solution:</b> The Town will develop and distribute guides for weather and emergency events. The Town will work with a web designer to add a mailing list to the Town website that the public can sign up for and be notified of hazard related information. In addition, the Town will evaluate potential outreach programs such as a phone app, Sign on Town Hall,</p>	No	None	2 years	Administration, Safety Officer	Low	Increased public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				school programs, and Town website updates and implement the selected strategies.										
2023-Town of Johnsbury-005	Emergency Notification System	2, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Town lacks an emergency notification system. <b>Solution:</b> The Town will explore options for an emergency notification system, select a system, implement the system, and promote residents to sign up.	No	None	2 years	Town Board	Medium	Emergency notification system established	Town budget	High	EAP	ES
2023-Town of Johnsbury-006	Flood Damage Prevention Ordinance Update	1	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				freeboard requirement. <b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.										
2023-Town of Johnsbury-007	Culvert Replacement	1	Flood, Severe Storm	<b>Problem:</b> Culverts throughout the Town are aging, broken, and undersized. <b>Solution:</b> The Town will complete a survey of culverts to identify the location, age, and size of each culverts. Following the survey, the Town will complete upsizing and replacement as necessary.	No	None	Within 5 years	Highway Department	High	Reduction in flood, flood damages, and road closures	CHIPS, HMGP, BRIC, PDM, Town budget	High	SIP	SP
2023-Town of Johnsbury-008	Dead Tree Removal	5	Severe Storm, Severe Winter Storm,	<b>Problem:</b> Dead or damaged trees pose a hazard as they can fall and block roadways or knock out power	No	None	2 years	Highway Department, Power company	Medium	Reduction in road closures and power outages	Town budget	High	NSP	NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Wildfire, Infestation	lines. This poses a wildfire risk as well. <b>Solution:</b> The Town will identify and remove dead and damaged trees along roadways to prevent damage. The Town will also mark trees to review with the power company for removal to protect power grid and reduce risk of starting a wildfire.										
2023-Town of Johnsbury-009	Unpaved Roads Improvements	1	Flood, Severe Storm, Severe Winter Storm	<b>Problem:</b> Only a quarter of roadways maintained by the Highway Department have paved surfaces. This has led to road washouts and bad ditch lines over time. <b>Solution:</b> The Town Highway Department will add additional material to unpaved roads	No	None	Within 5 years	Highway Department	High	Reduction in road washouts and flooding	CHIPS, Town budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				and shape to promote safe runoff. The Highway Department will dig out stormwater ditches that have become filled in over time.										
2023-Town of Johnsbury-010	Bridge Survey and Replacement	1	Flood, Severe Storm	<b>Problem:</b> Numerous bridges in the Town are anticipated to be at or near end of useful life. <b>Solution:</b> The Town will complete an engineering study to determine the status of Town owned bridges and develop a strategy and schedule for replacement. Replaced bridges will be built to the 500-year standard.	Yes	Permitting may be required	Within 5 years	Highway Department	High	Bridge failure avoided	CHIPS, HMGP, BRIC, PDM, Town budget	High	SIP	PP
2023-Town of	Substantial Damage Procedures	4	All Hazards	<b>Problem:</b> While major events that result in	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements,	Municipal budget	High	LPR	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Johnsbury-011				substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.  <b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations.						improved floodplain administration				

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:


The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:



Yes  Critical Facility located in 1% floodplain

*Mitigation Category:*

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

*CRS Category:*

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.





The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.7-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Johnsburg-001	Comprehensive Plan Update	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Johnsburg-002	Beaver Dam Flood Risk Reduction	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2023-Town of Johnsburg-003	Generators for Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Johnsburg-004	Hazard Mitigation Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Johnsburg-005	Emergency Notification System	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Johnsburg-006	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Johnsburg-007	Culvert Replacement	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Johnsburg-008	Dead Tree Removal	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023-Town of Johnsburg-009	Unpaved Roads Improvements	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Johnsburg-010	Bridge Survey and Replacement	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Johnsburg-011	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.7.8 Action Worksheets

The following action worksheets were developed by the Town of Johnsburg to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Generators for Critical Facilities		
<b>Project Number:</b>	2023-Town of Johnsborg-003		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	Critical facilities require backup power to maintain essential functions during and after disaster events. Numerous critical facilities in the Town lack backup power.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	<p>The Town will purchase and install permanent fixed generators and necessary electrical components at the following facilities:</p> <ul style="list-style-type: none"> <li>• Town Hall</li> <li>• Johnsborg Central School</li> <li>• Highway Department</li> <li>• Parks Department</li> <li>• Tannery Pond</li> <li>• Weavertown Court House</li> </ul> <p>It is assumed 20K generators will be needed for each facility. Following installation, the Highway Department will be responsible for maintenance.</p>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Central School District, Highway Department, Parks Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels at each facility	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbines at each facility	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			



<b>Date of Status Report:</b>	
<b>Report of Progress:</b>	
<b>Update Evaluation of the Problem and/or Solution:</b>	



Action Worksheet		
<b>Project Name:</b>	Generators for Critical Facilities	
<b>Project Number:</b>	2023-Town of Johnsbury-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of critical facilities
<b>Property Protection</b>	1	Project will protect buildings from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	All Hazards
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineer, Central School District, Highway Department, Parks Department
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



## SECTION 9.

### 9.8 TOWN OF LAKE GEORGE

This section presents the jurisdictional annex for the Town of Lake George that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Lake George's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.8.1 Hazard Mitigation Planning Team

The Town of Lake George identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Planning Department, Highway Department and Public Works Department. The Director of Planning and Zoning, Highway Department and Superintendent of Public Works represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.8-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Dan Barusch – Director of Planning and Zoning Address: 20 Old Post Road, Lake George, NY 12845 Phone Number: 518-668-5131 ex. 5 Email: <a href="mailto:dbarusch@lakegeorgetown.org">dbarusch@lakegeorgetown.org</a>	Name/Title: Rob Lanfear Jr. – Highway Superintendent Address: 22 Gage Road, Lake George, NY 12845 Phone Number: 518-668-2742 Email: <a href="mailto:highway@lakegeorgetown.org">highway@lakegeorgetown.org</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: Dan Barusch – Director of Planning and Zoning Address: 20 Old Post Road, Lake George, NY 12845 Phone Number: 518-668-5131 ex. 5 Email: <a href="mailto:dbarusch@lakegeorgetown.org">dbarusch@lakegeorgetown.org</a>	
<b>Additional Contributors</b>	
Name/Title: Dan Barusch, Director of Planning and Zoning	





Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on previous events, capabilities, NFIP administration, permit information. Contributed to mitigation strategy. Reviewed annex.	
Name/Title: Doug Frost, Code Enforcement Officer	
Method of Participation: Provided information on major development. Contributed to mitigation strategy.	

## 9.8.2 Municipal Profile

The Town of Lake George is in southeastern Warren County proximate to the southwestern shore of Lake George. The Town has a land area of 32.7 square miles of which 30.2 square miles is land and 2.5 square miles is water. There are three hamlets located in the Town: Big Hollow, Crosbyside and Diamond Point. The Town also included Bloody Pond located in the south part of town. Interstate 87 passes through the town.

According to the U.S. Census, the 2020 population for the Town of Lake George was 2,904 a 4.4 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 7.4 percent of the population is 5 years of age or younger and 27.0 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Lake George has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 8.38% of the population does not have a high school diploma
- 14.96% of the population has a disability
- 5.20% of households do not have a vehicle
- 4.94% of the population is living below the poverty level
- 1.48% of the population is unemployed

## 9.8.3 Jurisdictional Capability Assessment and Integration

The Town of Lake George performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.



For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Lake George to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Lake George. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.8-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	Warren County Code Chapter 150 (State Uniform Fire Prevention and Building Code); Town of Lake George Code Chapter 80 (Fire prevention and building construction)	County, Local	Town of Lake George Planning and Zoning Office; Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Lake George adopted the New York State Uniform Fire Prevention and Building Code. The Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Town of Lake George Chapter 175 (Zoning)	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance works in accordance with the Comprehensive Development Plan and is designed to promote the health, safety, morals and general welfare of the Town and to lessen congestion in the streets, to secure safety from fire, panic and other dangers, to provide adequate light and air, to avoid undue concentrations of population and to facilitate adequate provisions of the transportation, water, sewerage, schools, parks.  The Ordinance works to preserve and protect the natural characteristics of Lake George Park and the waters of Lake George and its tributaries to further benefit the community and retain the natural elements of the Adirondacks and Lake George.				
<b>Subdivision Ordinance</b>	Yes	Town of Lake George Chapter 150 (Subdivision of Land)	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance establishes the requirements and regulations for any subdivision projects. The Ordinance gives the Planning Board the responsibility to approve and approve with recommendations any subdivision projects.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Site Plan Ordinance</b>	Yes	Town of Lake George Chapter 175 (Zoning), Article VI (Site Plan Review)	Local	Planning and Zoning Office, Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Ordinance is to allow proper integration into the community uses which may be suitable within a zoning district only on certain conditions and only at appropriate locations. Because of their characteristics or the special character of the area in which they are to be located, their uses require special consideration so that they may be properly located and planned with respect to: <ul style="list-style-type: none"><li>• Impact on surrounding properties</li><li>• Impact on the natural, historic and scenic resources of the Town</li><li>• Protection of the health, safety and welfare of the community</li><li>• Substantial conformance with the Town of Lake George Comprehensive Plan</li></ul>				
<b>Stormwater Management Ordinance</b>	Yes	Town of Lake George Chapter 148 (Stormwater Management and Erosion and Sediment Control)	Local	Planning and Zoning Office; Stormwater Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance establishes minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	-	-	-
<b>Flood Damage Prevention Ordinance</b>	Yes	NFIP mandated - Town of Lake George Code Chapter 83 (Flood Damage Prevention), 1996	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, are protected against flood damage at the time of initial construction.</li></ul>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.</p> <p>D. Control filling, grading, dredging and other development which may increase erosion or flood damages.</p> <p>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.</p> <p>F. Qualify for and maintain participation in the National Flood Insurance Program.</p> <p>The chapter requires update to the meet the state's two foot freeboard requirement.</p>				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	Yes	Stream Corridor Management Regulations for the Lake George Park (175-34 in Lake George Town Code)	State/Local	Lake George Park Commission ; Planning and Zoning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Stream Corridor management regulations that were adopted by the LGPC were also adopted by the Town of Lake George with the revised Stormwater Management Regulations package. Additional buffer requirements will restrict any and all development or clearing of vegetative buffer at least 35' from all classified streams.</p>				
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Town of Lake George Comprehensive Plan (2015)	Local	Planning and Zoning Office, Comprehensive Plan Committee
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Comprehensive Plan establishes the short and long-term goals of the Town while maintaining the character of the Town and to maintain the health, safety and general welfare of the community.</p>				
<b>Capital Improvement Plan</b>	Yes	Town of Lake George Capital Improvement Plan (2022)	Local	Planning and Zoning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Capital Improvement Plan contains several projects related to infrastructure retrofitting to help ameliorate potential issues or damage to public property from hazardous storms, primarily the reconstruction of Big Hollow Road bridge over English Brook.</p>				
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	Yes	2009 Stream Assessment Report; 2013 Lake George Aquatic Invasive Species Prevention Plan	Local	Lake George Waterkeeper; Lake George Park Commission



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
2009 Stream Assessment Report: Includes an assessment of the chemical, physical, and biological data collected in the Lake George watershed.				
2013 Lake George Aquatic Invasive Species Prevention Plan: This document will be used by the Lake George Park Commission (Commission or LGPC) to evaluate alternative methods to limit to the maximum extent practicable the future introduction of aquatic invasive species (AIS) into Lake George. A range of alternative measures to prevent the introduction of AIS into Lake George have been identified and evaluated, including pros and cons, costs and logistics, and these are presented in detail in this Plan. The Preferred Alternative recommended in the Plan presents the highest practical level of prevention of potential new AIS introductions into Lake George, while minimizing the inconvenience to boaters. The Preferred Alternative is the mandatory inspection, prior to launch, of all motorized boats that are brought by trailer to Lake George. Those boats that do not meet the inspection standard of Clean-Drained-Dry (C-D-D) will be required to meet that standard prior to launch. If any trailered boat does not meet this standard, they must be decontaminated through a high pressure hot water (HPHW) process at the inspection site, at no cost, prior to launch into Lake George.				
<b>Stormwater Management Plan</b>	Yes	Town of Lake George Stormwater Management Program (SWMP) Plan	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater Management Plan outlines activities to address stormwater education, outreach, and implementation under the state requirements within the designated Urbanized Areas, as determined by the Census. The Plan documents the current efforts undertaken and planned by the Town.				
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	Yes	Lake George Economic Development Plan (2017)	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Other than discussion on incorporation of enhanced and upgraded utilities as part of any additional development to occur in the economic development zone(s), there is not much in relation to risk reduction in the Economic Development Plan.				
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/Resiliency/Sustainability Plan</b>	Yes	Lake George Climate Action Plan (2020)	Local	Planning and Zoning Office



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The Joint Town-Village Climate Action Plan addresses several things related to hazard and risk reduction and adapting to Climate Change and the adverse impacts it poses on the community. Several projects / actions identified in the CAP are related to infrastructure right-sizing, analyzing storm size for potential municipal infrastructure projects, and suggested policies to help encourage low impact development and other tools to deal with impacts of hazards from Climate Change.				
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	County	Warren County OES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The County Comprehensive Emergency Management Plan (CEMP) enhances the County's ability to manage emergency/disaster situations. The Plan outlines a comprehensive approach to risk reduction before a disaster or emergency and identifies short and long-term recovery goals.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan (Section 4)	County	Warren County OES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Section IV of the County CEMP identifies the roles and responsibilities of communities prior to and after an emergency event.				
<b>Public Health Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Other</b>	Yes	Town of Lake George Pandemic Operations Plan (2021)	Local	Planning and Zoning Office / Town Offices
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In regards to health hazard reduction there is not much in the plan to reduce risk per say, but the plan is specific to the response and operations of the government should a pandemic (such as COVID-19 Pandemic) occur. Required by NYS in 2020/2021.				





## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Lake George to oversee and track development.

**Table 9.8-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	–
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	Lane Use and Development Permits (and Zoning Compliance Certificates), Planning and Zoning Office
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	–
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain Development Permits are required buy only in identified FEMA flood zones/floodplains, not in localized flood-prone areas
Do you have a buildable land inventory?	Yes	–
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	Part of the LGA Data Atlas identifies building land inventory on a large/broad scale and LGA Data Atlas
Describe the level of build-out in your jurisdiction.	N/A	Build out analysis included in the Data Atlas.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Lake George and their current responsibilities that contribute to hazard mitigation.

**Table 9.8-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board is authorized to review and approve, approve with conditions, or disapprove site plans and subdivisions pursuant to and in accordance with the standards and procedures set forth in the Zoning Ordinance and Subdivision regulations.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals shall be appellate only and shall be limited to hearing and deciding appeals from and reviewing any order, requirement, decision, interpretation, or determination made by the Zoning Officer.
Planning Department	Yes	The Planning and Zoning Office administers the Zoning Code, Stormwater Regulations and Subdivision Regulations of the Town of Lake George, among other things. Additional duties of the Planning and Zoning Office include: <ul style="list-style-type: none"><li>• Septic Initiative Program (SIP) administration and Septic Permitting</li><li>• Hazard Mitigation Planning</li><li>• Climate Resiliency and Energy Efficiency Planning</li><li>• Historic Preservation Planning</li></ul>





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> <li>• Parks, Trails and Recreation Planning</li> <li>• Economic Development</li> <li>• Stormwater Management and MS4 Program Administration</li> <li>• Capital Improvement Planning</li> <li>• Assistance with Caldwell Sewer District</li> <li>• Geographic Information Systems (GIS)</li> <li>• Floodplain Management</li> <li>• Grant writing, administration, and management</li> <li>• Pandemic and Emergency Management Planning</li> <li>• Housing Development and Assistance</li> </ul>
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	"Go Green Committee" Town of Lake George Consolidated Board of Health
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway Department is responsible for the 33 miles (center lane) of Town Roads. The Department has an agreement with the County to provide some maintenance to 1 mile of County Highways for which it is reimbursed. The Department also provides sanding and snow removal for the Lake George Central School.
Construction/Building/Code Enforcement Department	Yes	See Planning Department
Emergency Management/Public Safety Department	Yes	Town of Lake George Emergency Squad Lake George Village Volunteer Fire Department
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Lake George Volunteer Fire Department Mutual Aid Plan; Lake George EMS Mutual Aid
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning; Code Enforcement Officer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning; Town of Lake George Town Engineer - Private (LaBella)



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with an understanding of natural hazards	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning
Staff with expertise or training in benefit/cost analysis	Yes	Town of Lake George Comptroller; Director of Planning and Zoning
Professionals trained in conducting damage assessments	Yes	Most of the Highway Department is "unofficially trained through experience"
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning; Town of Lake George Town Engineer – Private (LaBella)
Environmental scientist familiar with natural hazards	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning
Surveyor(s)	No	-
Emergency Manager	Yes	Town Supervisor; Director of Planning and Zoning and Town Comptroller (Pandemic Response Coordinators)
Grant writer(s)	Yes	Town of Lake George Planning and Zoning Office; Director of Planning and Zoning
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Stormwater Management Officer (Director of Planning and Zoning); Floodplain Administrator (Director of Planning and Zoning)

**Administrative/technical capability self-assessment****Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.**

Administrative and Technical capabilities allow the Town to easily integrate both mitigation and adaptation projects and undertakings in the Town in relation to risks and associated hazards from the HMP. The Highway Department is continuously working to mitigate impacts of storms and hazards to the Town roads through infrastructure upgrades and rightsizing, and the Planning Department continues to work on cross-integration between all planning disciplines, with goals of incorporating hazards and other potential risks into the various planning documents and efforts in Town such as within the Climate Action Plan and the Stormwater Management Program/Plan. In 2023, a potential Southern Basin Floodplain Management Plan will be developed in conjunction with the LC-LGRPB.

## Fiscal Capability

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

**Table 9.8-5. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	No
Capital improvements project funding	No
Authority to levy taxes for specific purposes	Yes – Eligible at budget time
User fees for water, sewer, gas or electric service	Yes – Eligible at budget time
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes – Eligible
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes – accessible



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes – accessible

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Lake George.

**Table 9.8-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	–
Personnel skilled or trained in website development	No	–
Hazard mitigation information available on your website	Yes	Located under Planning and Zoning Department
Social media for hazard mitigation education and outreach	No	–
Citizen boards or commissions that address issues related to hazard mitigation	No	–
Warning systems for hazard events	No	–
Natural disaster/safety programs in place for schools	No	May take place within LG Central School District
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	–

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Lake George.

**Table 9.8-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	September 1, 2014
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Passed CSC Pledge, Certified	Pledge (2016) Certified (2020)
Storm Ready Certification	No	(Warren County participates)	–
Firewise Communities classification	No	–	–
Other	No	–	–

Note:



N/A Not applicable  
 - Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.8-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

## 9.8.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Lake George.

**Table 9.8-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Lake George	8	7	\$23,323	0	1	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss



**RL FMA Definition** Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

**RL NFIP Definition** Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Lake George.

**Table 9.8-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Yes, the Town maintains a list of properties that have been flood damaged. The Town has a short list of properties that are within FEMA flood zones. There are additional areas in Town in “flood-prone” areas, which are not on FEMA flood maps.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	No, the Town does not identify property owners interested in mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	FEMA did a RiskMAP Analysis for the Upper Hudson Watershed in 2018/2019, and are working separately on a Warren County Flood Hazard Study in 2022.
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	The Town does not have a staff person who is authorized to make substantial damage estimates
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	Based on records, none of the (dozen or so) properties that exist within the mapped FEMA flood zones have been mitigated/elevated/acquired.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	No, they do not. The only flood zone maps from FEMA are in relation to the Schroon River. There are many other flood prone areas in Town, and the Town hopes to work on a Floodplain Management Plan to preempt any potential FIRM updates/requests.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Planning and Zoning Office (Director of Planning and Zoning)
Are any certified floodplain managers on staff in your jurisdiction?	The Director of Planning and Zoning acts as the Floodplain Administrator, but is not a CFM.
Do you have access to resources to determine possible future flooding conditions from climate change?	Not directly, no.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	The FPA is adequately supported and trained. The FPA would consider additional training/certifications when available.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS,	Zoning staff conduct routine inspections on properties within the floodplain (specifically in the Schroon River



NFIP Topic	Comments
education/outreach, inspections, engineering capability)	<p>Floodplain); assist with damage assessments conducted by Lake George Department of Public Works / Highways when damages are recorded; and have recently started educating specific applicants that may lie within / near floodplains within Lake George. The Director of Planning and Zoning also works on floodplain development permit review when/if they are submitted. Education and Outreach on the topic is less than adequate.</p> <p>The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.</p>
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Consultation with NFIP documents, the Town's Flood Damage Prevention Ordinance (Ch. 83), and the Town's Engineer /Counsel as applicable/needed.
What are the barriers to running an effective NFIP program in the community, if any?	The program is in good shape and good standing with NFIP, but improvements could be made to the education/outreach aspects.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"><li>If so, state the violations.</li></ul>	The Town is in good standing with NFIP compliance.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	September 10, 2015
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"><li>What is the date that your flood damage prevention ordinance was last amended?</li></ul>	The Town's Flood Damage Prevention Ordinance, Chapter 83 of the Town Code. Originally adopted in 1994 but amended in full in 1996. Could use amendments.
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"><li>If exceeds, in what ways?</li></ul>	Meets minimum requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	<p>Any applications that go through the Planning and Zoning Office, including Area/Use variances, Site Plan Reviews, and Land Use and Development permits, are all considered for flood permit review (only deemed necessary if the parcel falls within the floodplain boundaries).</p> <p>Other plans or programs that support floodplain management include our stormwater management program plan, our stormwater regulations located in Town Code Chapter 148, which include strict stormwater mitigation measures and standards for all projects located within the town. Consistently the Town Planning Board requires stormwater control measures for projects in order to help reduce flood risk and control stormwater runoff.</p>



NFIP Topic	Comments
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Due to limited resources it may not be feasible to participate, depending on level of involvement or recurring work required.

## 9.8.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.8-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.8-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	90	0	80	0	80	0	85	0	84	0	80	0
Multi-Family	0	-	0	-	1	0	0	-	2	0	4	0
Other (commercial, mixed-use, etc.)	17	0	11	1	15	1	21	0	25	0	14	0
Total New Construction Permits Issued	107	0	91	1	96	1	106	0	111	0	98	0

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2017 to Present					
Crosbyside Townhomes	Residential	19 townhomes (2/3 bd units) – assume 48 bedrooms)	264.35-1-20	None identified	Underway, expected completion in 2023
Hillcrest Townhomes	Residential	24 townhomes (2/3 bd units) – assume 60 bedrooms)	264.12-1-27.1	None identified	Underway, expected completion in 2024
Hearthstone Townhomes	Residential	10 townhomes (3 bd units) – assume 30 bedrooms	238.16-1-6	None identified	Underway, expected completion in 2024





Type of Development	2017	2018	2019	2020	2021	2022
Sun Valley Apartments	Residential	39 apartments (2 bd units) – assume 78 bedrooms	264.11-1-37	None identified	Underway, expected completion in 2024	
Forest Ridge	Residential	7 lot subdivision, 6 single family homes	Truesdale Road	None identified	Began 2017, in progress	
Hearthstone Townhouses	Residential	11 lot subdivision to include 10 townhomes	Lakeshore Drive	None identified	Began 2021, in progress	
Mountain's Edge	Residential	17 single family homes	Michelli Road	None identified	Approved in 2012, started construction 2022. 1 home complete, 5 underway.	
Whisper Glen	Residential	10 lots	Route 9N	None identified	Approved in 2009, 2021 start to construction, 3 houses currently underway.	
Diamond Lookout	Residential	15 lots	Diamond Point Road	None identified	3-4 complete, 3-4 underway	
Spring Woods Subdivision	Residential	12 lots	Diamond Point Road	None identified	3 homes complete, 1 underway	
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>						
Route 9L Laundromat	Commercial	N/A – 14,000 gpd commercial maximum capacity	264.11-1-4.2	None identified	Planning Board approval pending; 2023 construction anticipated	
Lamondo 9L Rentals	Residential	7 rentals (3 bd units) – assume 21 bedrooms	264.08-2-28, 264.08-2-29	None identified	Planning Board approval pending; 2024 construction anticipated	
English Brook Village	Residential	16 apartments (2/3 bd units) – assume 40 bedrooms	251.10-2-31.2	None identified	Approved (in engineering review); 2025 construction anticipated	
McGowan/Schermerhorn Senior Living	Residential	32 apartments (mostly 1 bd, some 2 bd units) – assume 40 bedrooms	264.12-1-7	None identified	Sketch Plan Review; 2025 construction anticipated	



Type of Development	2017	2018	2019	2020	2021	2022
Gross PUD (Ramada)	Mixed Use	99 apartments (2/3 bd units) – assume 250 bedrooms; and 5,000 SF commercial space	264.03-2-2	None identified	Sketch Plan Review; 2026 construction anticipated	
LG Community Partners (Bloody Pond)	Residential	64 apartments (2/3 bd units) – assume 160 bedrooms*	264.12-1-61, 264.12-1-62, 264.12-1-58.12	None identified	Sketch Plan Review; 2027 construction anticipated	
Waterslide World PUD	Mixed Use	150 apartments (1/2/3 bd units) – assume 300 bedrooms; and assume 50,000 SF commercial space	264.11-1-3, 264.11-1-2, 264.11-1-1	None identified	Nothing submitted; 2027-2028 construction anticipated	
Schermerhorn 9L project	Residential	16 apartments (2/3 bd units) – assume 40 bedrooms	264.11-1-40	None identified	Nothing submitted; 2026 construction anticipated	
Ellsworth Magic Forest Apartments	Residential	90 apartments (1/2/3 bd units) – assume 180 bedrooms**	264.04-1-35, 264.04-1-36, 264.04-1-37	None identified	Nothing submitted; 2027-2028 construction anticipated	

SFHA Special Flood Hazard Area (1% flood event)

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

\*\* Permit software does not differentiate between residential and commercial projects, so assumptions/estimates were used. 98 permits for 2022 is from 1/1/22 to 11/9/22 (Assume another 10-15 permits before 12/31/22)

2018 Project – LG Riverview RV Park Campground expansion (APA project, DEC SPDES, Town approvals) – no actual “structures”

2019 Project – LG Escape Campground Wetland Remediation and Shoreline Project (APA Project, DEC SPDES, Town approvals) – no actual “structures” other than water conveyance structures (i.e. culverts)



### 9.8.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Lake George's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Lake George has significant exposure are provided. [The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.](#)

DRAFT



Figure 9.8-1. Town of Lake George Flood Hazard Area Extent and Location Map

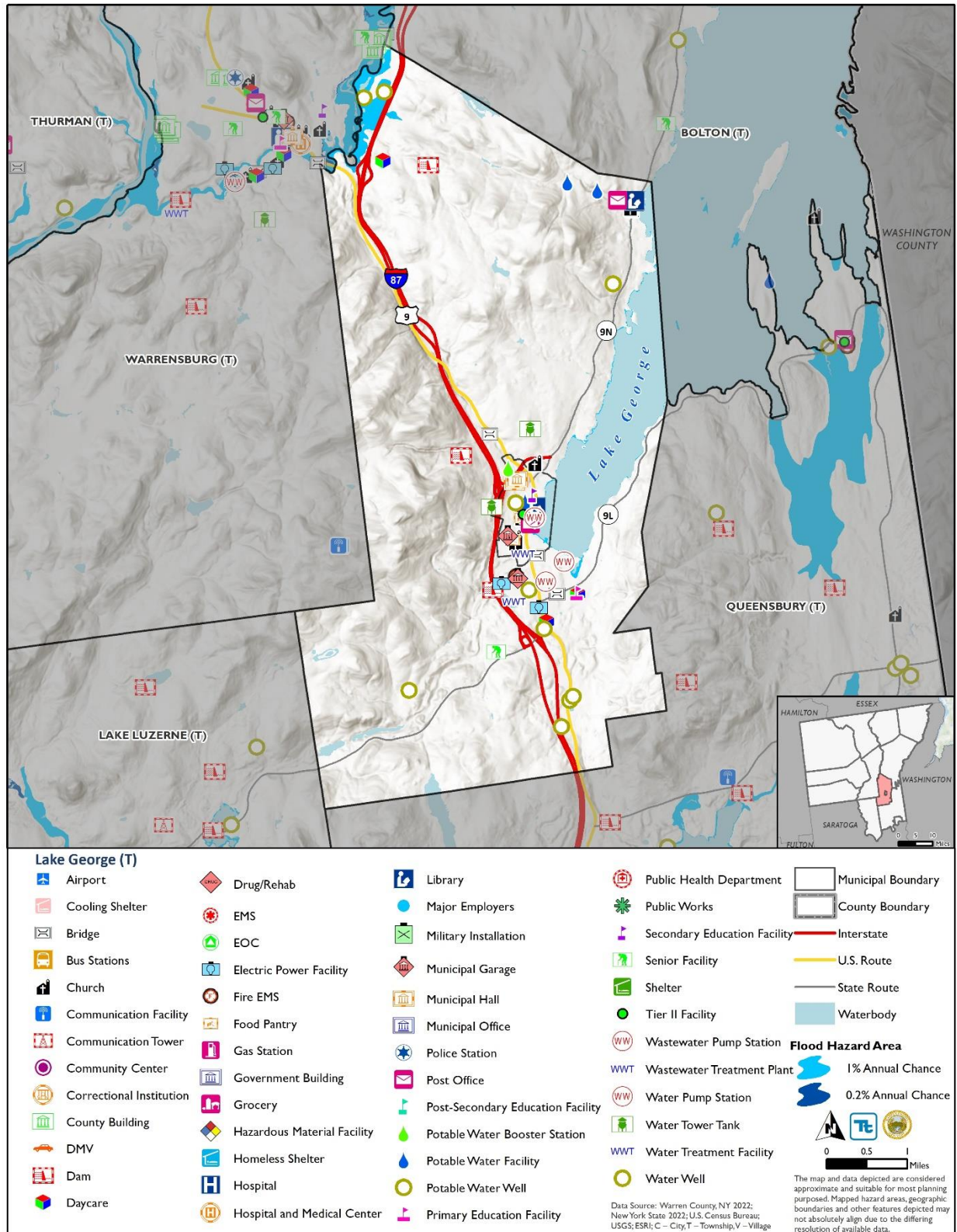
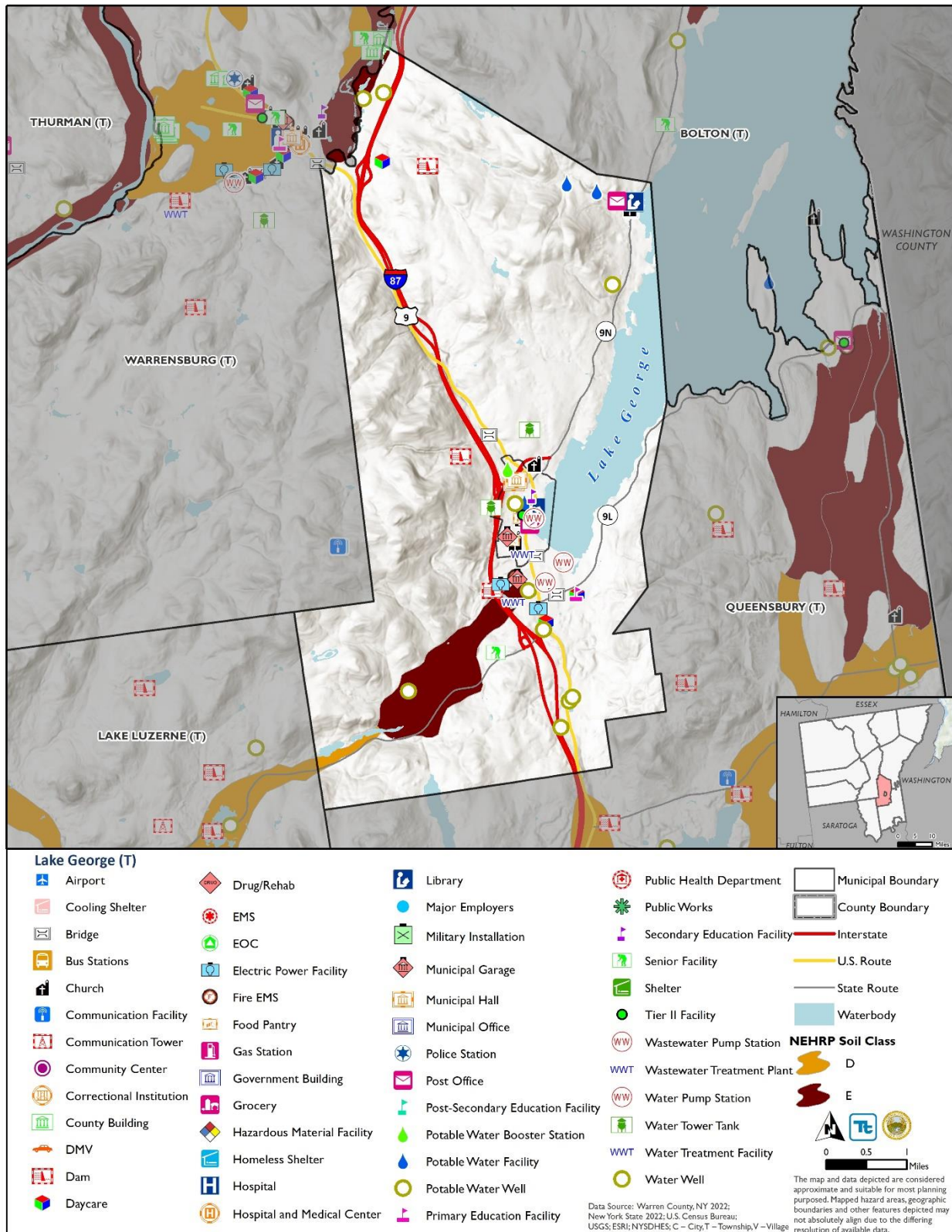






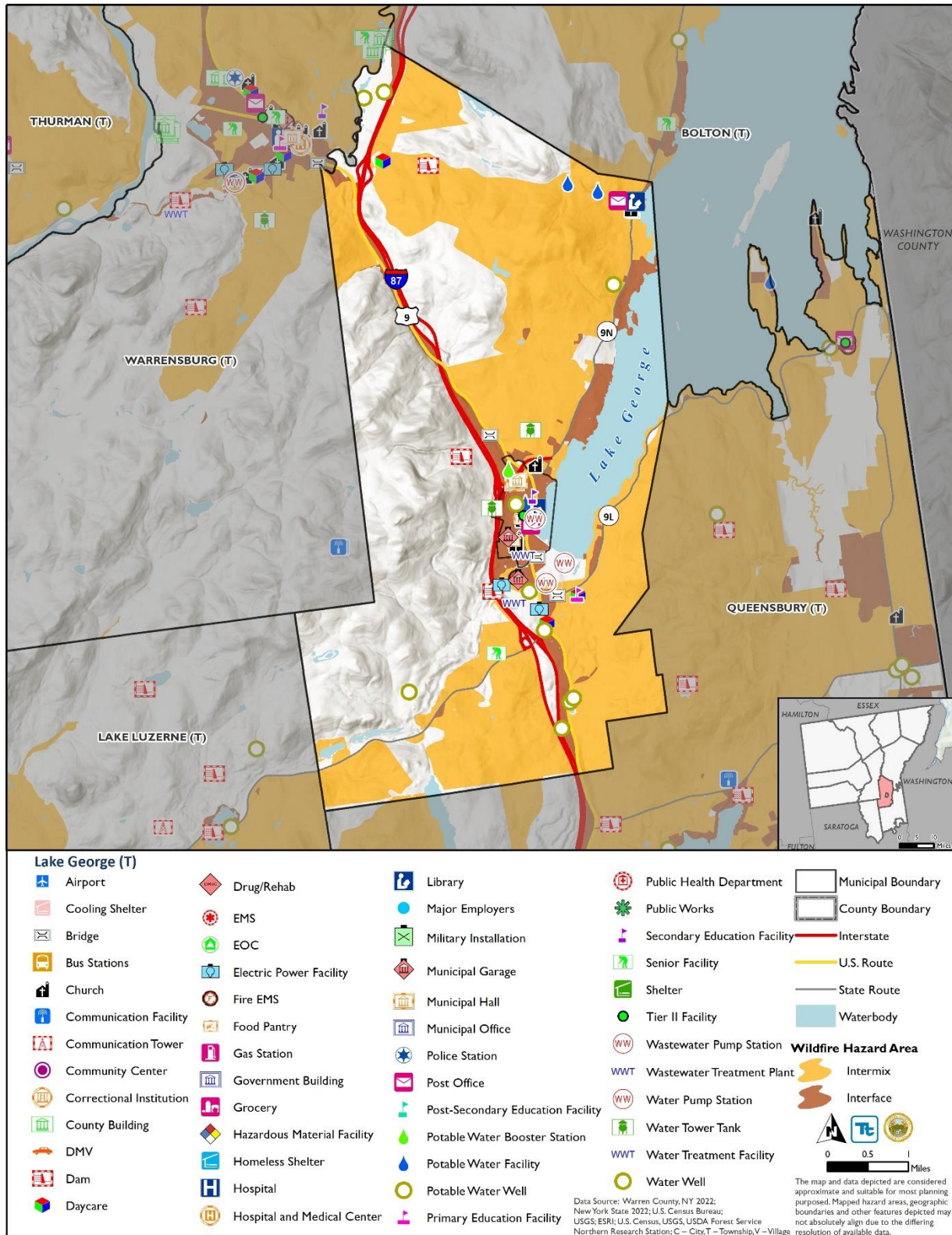
Figure 9.8-2. Town of Lake George Earthquake (Soil Class) Hazard Area Extent and Location



Map



Figure 9.8 3. Town of Lake George Wildfire Hazard Area Extent and Location Map







## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Lake George's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.8-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.8-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
May 4, 2018	Thunderstorm Wind	Yes	A powerful low pressure system formed on May 4th, pushing a strong cold front across eastern New York. A line of thunderstorms developed along this front in the afternoon and evening, resulting in widespread wind damage. Nearly 60,000 customers lost power as a result of the storms. Particularly intense damage occurred in the villages of Johnstown and Cambridge, the town of Hebron, and Saratoga National Historical Park, where dozens of trees were uprooted and snapped in concentrated swaths. Some of these trees fell onto cars and houses, resulting in property damage. the evening hours, strong non-thunderstorm winds developed behind the cold front, impacting portions of the southern Adirondacks. Winds gusted as high as 58 mph at Chestertown, and a few trees and limbs were downed.	Route 9L was closed between Bay and Beach Roads due to downed trees and wires.
October 31, 2019	Halloween Storm: Severe Storms, Straight-line winds, Flooding (DR-4472)	Yes	2-4" of rain fell causing localized flooding and scattered areas of damage to public and private property	Minor flooding from some stormwater systems and minor damage to local roadways, larger damage to private properties (Lakefront Terrace Hotel).
September 8, 2021	Thunderstorm Wind	No	A line of strong to severe thunderstorms resulted in widespread damage over eastern New York on Wednesday September 8, 2021.	A trained weather spotter reported numerous trees snapped and uprooted along Exit 22 north of 9N.





Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January 20, 2022	Covid-19 pandemic (DR- 4480, EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid- 19.	The Town was subject to closures and masking/social distancing requirements.
February 18, 2022	Flood	No	A storm system pushed across the region during February 17-18, 2022. Warm air pushed northward into the region along with periods of rainfall before a cold front brought the return of windy and colder weather. A convective line of gusty showers also accompanied the cold frontal passage. Some locations picked up over 1 inch of rainfall which led to minor flooding in a few locations. In the wake of the cold front, strong winds affected areas mainly along and south of I-90 with gusts 40 to 55 mph observed, resulted in a few downed trees. The warm and rainy weather ahead of the cold front resulted in some snow melt as well as some ice to break up on area rivers and streams. As the colder weather returned, localized ice jams formed, some of which led to flooding, including in Dolgeville and Canajoharie.	The Howard Johnson by Wyndham Lake George hotel parking lot on Canada Street was flooded early Friday morning. The Lake George Volunteer Fire Department rescued a man who was trapped on top of his pickup truck in the flooded parking lot. Lake George Fire Chief said the flooding was a result of water runoff from Prospect Mountain that flows into the drainage portion of the parking lot which wasn't able to keep up with the amount of water coming in. There was about 8 feet of water in the parking lot. The rooms on the ground level of the hotel also flooded with water.
April 8, 2022	Flooding "April Storm"	Unknown	2-3" of rain fell causing localized flooding and scattered areas of damage to public and private property	The Town's Lower Pump Station flooded from runoff concentrated off of Beach Road, causing major I&I. Other private damaged recorded to Lakefront Terrace Hotel (Washout).

## Notes:

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



**Figure 9.8-3. 2019 Flooding at Lake George Escape Campground**



Source: Warren County SWCD

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Lake George's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Lake George. The Town of Lake George reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town changed the hazard ranking for flood from low to medium, noting that while calculated probability of flood may be low, impacts on people/property/economy is medium at least from flooding, and the degree to which climate change will affect this is high.
- The Town changed the hazard ranking for dam failure from high to medium, noting that there is exposure to dam failure but the risk of failure is low.
- The Town agreed with the remainder of the calculated hazard rankings.

**Table 9.8-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Medium	High	High	High	Medium

Dam Failure	Disease Outbreak
Medium	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.8-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
None identified					

Source: Warren County 2022

Although the Town of Lake George does not have any critical facilities located in the 1-percent or 0.2-percent floodplain, the Town believes that the current FIRM maps underrepresent the proper size of the floodplain.

### Identified Issues

After review of the Town of Lake George's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Lake George identified the following vulnerabilities within their community:

- Integration of hazard mitigation concepts is needed to support the Town's hazard mitigation goals.



- The Town does not participate in the StormReady program. The Town is interested in increasing storm warning and notifications.
- Stormwater conveyances around the Town are maintained and improved by the Highway Department; however, improvements to the systems are few and far between due to lack of funding for expensive retrofits or repairs needed.
- An IMA exists between the Town and County regarding maintenance for a roadway in the Winter, but the Town is unsure if a formal IMA exists between the two regarding other hazard response and effectiveness.
- The Town is seeking to establish an agreement with NYS DEC to ensure state owned properties and facilities are maintained and addressed during and after hazard events.
- The Town lacks a debris management plan to handle post-disaster cleanups.
- Current floodplain mapping is considered inadequate and requires more data and detail.
- Additional training for wildfire response is needed for Town officials.
- While FEMA brochures are available at Town Hall and some information is available on the Town website, additional flood outreach is needed.
- The FPA (Director of Planning and Zoning) lacks certification and could use updated training.
- To date, two sub-watershed assessments have been completed (East side/Front Street; Lakeview Circle) but additional sub-watershed assessments should be completed to further Town-wide efforts.
- Lake George Escapes Campground and Riverview Campground have a history of flood issues. Both have completed some work since 2017, some of which were related to stormwater runoff and/or dealing with surface water, but each would benefit from flood-proofing audits.
- Stormwater flooding requires stormwater improvements to reduce flood risk at several locations in the Town.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- The Old County Courthouse is a Town owned facility that lacks a backup power source. The facility houses several Lake George Historical Association and museum, Lake Champlain Regional Planning Office, and other groups.
- An update to the Town Comprehensive Plan is needed in the next few years.
- Staff require training to respond to dam failure events. There are several privately owned dams including Big Hollow Reservoir, Gage Brook Reservoir, and Orebed Reservoir.
- Problem: There is a general lack of public awareness regarding hazards and response. Although the Town completes outreach related to hazards, improvements can be made to encourage better personal mitigation and education for children. Critical infrastructure for the sewer district has been compromised by the elevated Beach Road, which creates direct runoff towards the Lower Pump Station.
- There are a few properties that are within the Schroon River flood zone, but the Town is unaware of their status in terms of repetitive loss or flood insurance claims. Some property along the River or along English Brook would likely benefit from either.



### 9.8.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

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The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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**Table 9.8-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLG-1	Review and update local comprehensive and stormwater plans to integrate the risk assessment, goals, objectives, activities, and recommendations of the hazard mitigation plan which are not found in existing regulatory documents.	All Hazards	Plan consistency	Town Board, Planning Dept.	In Progress	Cost		1. Include in 2023 HMP 2. Limited manpower has been an obstacle for this action. A review of local plans will be done in the next year or two in anticipation of including new HMP objectives and goals into these plans, as appropriate. The potential future floodplain management plan will be the biggest effort to achieve this goal. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-2	Participate in the StormReady program.	Flood, Severe Storm	Unknown	Town Board, Planning Dept.	No Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-3	Develop and implement a plan to collaborate with State and private property owners to reduce risks from beaver dams in areas including Truesdale Hill Road.	Flood	Pre-2017 beaver dam issues on Truesdale Hill Road.	Planning Dept, NYS DEC, Private property owners	No Progress	Cost		1. Discontinue 2. 3. This was a low priority item in the prior plan and since the prior plan minimal if any damage or issue has been identified with the two areas in Town with beaver dams.
						Level of Protection		
						Damages Avoided; Evidence of Success		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLG-4	Maintain cleared areas around roadways (obstructions of groundwater, infestation), including: <ul style="list-style-type: none"> <li>Rt. 9L</li> <li>Flat Rock Rd.</li> <li>Front St.</li> <li>Lakeshore Dr.</li> <li>Prospect Mountain</li> <li>Roads adjacent to Lake</li> </ul>	Flood	General debris management in relation to storms/hazards	Town HIGHWAY DEPARTMENT	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
TLG-5	Educate residents regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earth-quakes, and all other natural hazards) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities.	All Hazards	Education and Outreach of hazards is lacking	Town Board; Superintendent; Planning Department; school districts; County Office of Emergency Services	In Progress	Cost		1. Include in 2023 HMP 2. Limited manpower has been an obstacle and minimal funding for hazard-related activities has delayed any educational outreach. Assistance with education and outreach of hazards would be a primary focus of improving local efforts. Unclear whether or not the County office of Emergency Services or the School Districts have instituted educational outreach regarding natural hazards. 3.
TLG-6	Coordinate/create mutual aid agreements public	All Hazards	Recorded agreements regarding	Town HIGHWAY DEPARTMENT	In Progress	Cost		1. Include in 2023 HMP 2. IMA exists between the Town and County regarding maintenance for





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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	works departments to ensure efficient use of resources during and after storm events.		hazard response is lacking			Damages Avoided; Evidence of Success		a roadway in the Winter, but not sure formal IMA exists between the two regarding storm response and effectiveness. If not, suggest a consolidated one.  3.
TLG-7	Agreement between the Town and NYS DEC for cleaning and maintaining properties and roadways on state and private owned lands, including Prospect Mountain and Battlefield Park grounds.	Flood	Unknown (but the 2022 April flood in the pump station solidified the need)	Town Board, Planning Department, NYS DEC	No Progress	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. To also include how NYS DEC will attempt to work with the Town to safeguard and prohibit hazards (floods) at the two sewer pump stations on the NYS DEC lands. 3.
TLG-8	Develop a Debris Management Plan specifically for the Town of Lake George.	Flood, Severe Winter Storm	Debris management in general in relation to hazards/floods	Town HIGHWAY DEPARTMENT, Planning Dept.	No Progress	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. Potentially incorporate Debris Management into a County-wide plan. 3.
TLG-9	Develop a Town of Lake George Flood Management Plan.	Flood	Flood zone identified and mapped floodplains are inadequate	Planning Dept.	In Progress	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. Town is working with the LC-LGRPB to secure funding to develop a Southern Basin Flood Management Plan. 3.
TLG-10	Send a LGVFD representative to	Wildfire	Unknown	Fire Dept, Town Supervisor	No Progress	Cost Level of Protection		1. Discontinue 2.



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	NYS Wildland Fire Supp. Training.					Damages Avoided; Evidence of Success		3. It is assumed that the Fire Department have members who have attended or routinely attend NYS wildland fire suppression training.
TLG-11	Provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding. Information may include brochures, FEMA handouts, and online links.	Flood	Education and Outreach of hazards is lacking	Town Board, County OES	In Progress	Cost		1. Include in 2023 HMP 2. FEMA brochures are available at the Town Hall and floodplain information in general is available on the Town's website, but no other outreach is completed. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-12	Educate specific homeowners who have property in the floodplain areas on carrying NFIP policies.	Flood	NFIP properties unaware of program or potential hazards/issues	Town Floodplain Administrator	In Progress	Cost		1. Include in 2023 HMP 2. General response and information has been given to those in the flood zones in Town that have asked or been in contact with the Town. No consolidated formal effort to educate all owners at once is completed. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-13	Continue an annual inventory to detail at-risk infrastructure and public structures in the Town of Lake George.	All Hazards	Unknown	Planning Dept., Building Inspector, Warren County	In Progress	Cost		1. Include in 2023 HMP 2. Would be beneficial to include a high-level summary of at-risk facilities/structures in this HMP. However, it is likely that will be integrated into a Flood management plan if one is completed. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-14	Support the mitigation of vulnerable structures	All Hazards	Obvious needs to adapt to hazards that	Town Board, Planning Dept.,	Ongoing Capability	Cost		1. Include in 2023 HMP 2. Would be beneficial to include a high-level summary of at-risk
						Level of Protection		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		<ol style="list-style-type: none"> <li>Next Steps Project to be included in 2023 HMP or Discontinue</li> <li>If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
	<p>via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with critical facilities and repetitive loss properties as a priority when applicable. Town support shall include direct outreach to flood-prone property owners, specifically critical facility owners/operators and those identified by FEMA as RL/SRL or otherwise identified as flood-prone, and working with interested and voluntary property owners to mitigate their properties based on available funding from FEMA and local (property owner) match availability.</p> <p>Efforts to mitigate critical facilities shall recognize Federal and State directives for protection to the</p>		cannot be mitigated, as well as planning for Climate Change			Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> <li>infrastructure in this HMP. However, it is likely that will be integrated into a Flood management plan if one is completed. The Highway Department to continue right-sizing infrastructure where appropriate/as needed.</li> <li></li> <li></li> </ol>



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	500-year flood level or "worst case scenario".							
TLG-15	Send a town representative to the local (County) and/or State FPA training.	Flood	FPA lacks certification and could use updated training	Town Board, Planning Dept.	No Progress	Cost		1. Include in 2023 HMP 2. The Director of Planning and Zoning (also the FPA) would be interested in attending FPA training but has not yet done so. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-16	Develop engineering assessment of sub-watersheds in town. Assess all areas of town with issues of stormwater runoff. Could be annexes to Flood Management Plan (TLG-9)	Flood	Need to focus locally on smaller geographic areas that cause flooding	Town Board, Planning Dept	In Progress	Cost		1. Include in 2023 HMP 2. To date, two subwatershed assessments have been completed (East side/Front Street; Lakeview Circle) but additional subwatershed assessments should be completed to further Town-wide efforts. It is likely that will be integrated into a Flood management plan if/when one is completed. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-17	Encourage flood mitigation at Lake George Escapes Campground, including potentially elevating or flood-proofing office and maintenance buildings.	Flood	Primary focus is on ameliorating issues at the campground properties in the flood zones	Town Floodplain Administrator, Planning Dept.,	In Progress	Cost		1. Include in 2023 HMP 2. Add Riverview Campground. Both Riverview and LG Escapes have completed some work since 2017, some of which were related to stormwater runoff and/or dealing with surface water. Both would benefit from flood-proofing audits. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLG-18	Lake View Circle Drive and Pine Lane Intersection	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept.	Complete	Cost	\$100,000	1. Discontinue 2.
						Level of Protection		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	stormwater improvements.					Damages Avoided; Evidence of Success	Less sediment and overall material entering into the lake from the tributary outfall at Lakefront Terrace. No discharges/overflows in Lakeview Circle since the project was completed.	3. Part of the larger Lakeview Circle Stormwater Improvements (2017-2018), a DEC WIP grant project that incorporated \$100k of stormwater and stream stabilization work.
TLG-19	Middle Road South of Sherrick Drive stormwater improvements	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept.	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2. Consider merging all localized actions/projects into one? It is likely that will be integrated into a Flood management plan if/when one is completed.
						Damages Avoided; Evidence of Success		3
TLG-20	Middle Road South of Carefree Lane stormwater improvements	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2. Consider merging all localized actions/projects into one? It is likely that will be integrated into a Flood management plan if/when one is completed. Consider indicating LGLC help purchase McAviney site for potential wetland project.
						Damages Avoided; Evidence of Success		
TLG 21	Michelli Drive stormwater improvements	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2. Consider merging all localized actions/projects into one? It is likely that will be integrated into a Flood management plan if/when one is completed.
						Damages Avoided; Evidence of Success		3.
		Flood				Cost		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLG-23	Continue to review and evaluate additional projects from sub-watershed report (Antler Ave & Lake View Circle Dr. intersection; Lake View Brook outlet; Carefree Lane) for further action.		Priority areas for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept	In Progress	Level of Protection		1. Include in 2023 HMP 2. Focus on development of new sub-watershed analyses or integration of such analyses into the Flood management Plan for potential project concept and evaluation. 3.
TLG-24	Middle Road North of Carefree Lane – Install a roadside buffer along the stream banks a 200' section of the brook that flows alongside Middle Road between two stream crossings. Project would increase water quality in this stretch of brook flowing very close and parallel to Middle Road.	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept	No Progress	Cost Level of Protection Damages Avoided; Evidence of Success		1. Include in 2023 HMP 2. Consider merging all localized actions/projects into one? It is likely that will be integrated into a Flood management plan if/when one is completed. 3.
TLG-25	Complete Municipal Stormwater Retrofit Recommendations not already included in this HMP as presented in the 2014 Lake View Watershed Report.	Flood	Priority area for stormwater	Town HIGHWAY DEPARTMENT, Planning Dept	Complete	Cost Level of Protection Damages Avoided; Evidence of Success	\$100,000 total 75-85% No more discharges/overflows. Material being captured in practices	1. Discontinue 2. 3. Part of the larger Lakeview Circle Stormwater Improvements (2017-2018), a DEC WIP grant project that incorporated \$100k of stormwater and stream stabilization work. Since the work was completed, no stormwater discharges have occurred in the



## SECTION 9.8. Town of Lake George

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		1. Next Steps Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
								watershed, other than the unassociated issues downstream at the Lakefront Terrace.
TLG-26	Provide municipal support as needed and appropriate to the following NYS DOT project: DOT is planning Bridge corrective maintenance at two locations along NYS Route 9 over English Brook, within Town of Lake George during Fall 2017. The project proposes to add scour material to prevent continued erosion and protect the structures.	Flood	Unknown	Town HIGHWAY DEPARTMENT, Planning Department – supporting NYS DOT project	No Progress	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Project already completed (?) by DOT. Possible incorporation of general action item regarding municipal support and involvement in design and needs assessment for state highway projects.





## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.8-15, the Town of Lake George identified the following mitigation efforts completed since the last HMP:

- Backup power was established for the water station at Diamond Point.
- Lake George Escape Campground was flooded in 2019 leaving the majority of campsites impacted. In 2019, representatives of the Campground met with representatives from the Town, County, Schroon Lake Park District to discuss flood risk and potential mitigation actions. Roughly 90-percent of the campground is in the floodplain. At Lake George Escape Camping Resort, a million dollar project was completed to restore wetlands that had been filled post-APA Act by previous owners, create new/enhance existing wetlands as remediation for material that can't be removed, and restore eroded streambanks along the Schroon River caused by uncontrolled access by campers.
- Stormwater infrastructure improvements were completed near the McAviney wetlands.

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Lake George participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.8-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X		X	X	X	X		X	X
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm	X	X		X	X	X	X			X
Wildfire	X			X	X	X	X			X
Infestation	X			X	X	X	X			X
Dam Failure	X			X	X	X	X			X
Disease Outbreak	X			X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.8-17).

The table below summarizes the specific mitigation initiatives the Town of Lake George would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.8-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023–Town of Lake George–001	Hazard Mitigation Integration	4	All Hazards	<b>Problem:</b> Integration of hazard mitigation concepts is needed to support the Town’s hazard mitigation goals. <b>Solution:</b> A review of local plans will be done in the next year or two in anticipation of including new HMP objectives and goals into these plans, as appropriate. The potential future floodplain management plan will be the biggest effort to achieve this goal.	No	None	2 years	Town Board, Planning Department	Low	Increased integration and planning consistency	Town budget	High	LPR	PR
2023–Town of Lake George–002	StormReady Program	3	Severe Storm, Severe Winter Storm	<b>Problem:</b> The Town does not participate in the StormReady program. The Town is interested in increasing storm warning and notifications. <b>Solution:</b> The Town will complete program prerequisites and apply to join the NWS StormReady program.	Yes	None	Within 5 years	Town Board, Planning Department	Low	Increased storm warning and notifications	Town budget	High	LPR	ES
2023–Town of	Stormwater Retrofit Fund	4	Flood, Severe Storm	<b>Problem:</b> Stormwater conveyances around	Yes	None	Within 5 years		Staff time	Funding established	Town budget	High	SIP	SP



## SECTION 9.8. Town of Lake George

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Lake George-003				<p>the Town are maintained and improved by the Highway Department; however, improvements to the systems are few and far between due to lack of funding for expensive retrofits or repairs needed.</p> <p><b>Solution:</b> The Town will consider a stormwater retrofit fund in the Town Budget, to be associated with MS4 program boundary.</p>				Administration, Highway Department		for stormwater improvements				
2023-Town of Lake George-004	Mutual Aid Agreements	3, 4	Flood, Severe Storm, Severe Winter Storm, Wildfire	<p><b>Problem:</b> An IMA exists between the Town and County regarding maintenance for a roadway in the Winter, but the Town is unsure if a formal IMA exists between the two regarding other hazard response and effectiveness.</p> <p><b>Solution:</b> The Town will coordinate/ create consolidated mutual aid agreements public works departments to ensure efficient use of</p>	No	None	1 year	Town Highway Department, Warren County	Staff time	Increased capabilities, partnership	Town budget	High	LPR	PR



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Lake George-005	NYS DEC and Town Maintenance Agreements	3, 4	Flood, Severe Storm, Severe Winter Storm, Wildfire	<p>resources during and after storm events.</p> <p><b>Problem:</b> The Town is seeking to establish an agreement with NYS DEC to ensure state owned properties and facilities are maintained and addressed during and after hazard events.</p> <p><b>Solution:</b> The Town will work to establish an agreement between the Town and NYS DEC for cleaning and maintaining properties and roadways on state and private owned lands, including Prospect Mountain and Battlefield Park grounds. This will also include how NYS DEC will attempt to work with the Town to safeguard and prohibit hazards (floods) at the two sewer pump stations on the NYS DEC lands.</p>	No	None	1 year	Town Board, Planning Department, NYS DEC	Staff time	Increased capabilities, partnership	Town budget	High	LPR	PR
2023-Town of Lake George-006	Debris Management Plan	3, 4	Earthquake, Flood, Severe Storm, Severe Winter	<b>Problem:</b> The Town lacks a debris management plan to handle post-disaster cleanups.	No	None	Within 5 years	Town HIGHWAY DEPARTMENT, Planning Dept.	Low	Better post-disaster planning	BRIC, PDM, Town budget	High	LPR	ES



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Storm, Wildfire, Dam Failure	<b>Solution:</b> The Town will develop a debris management plan and integrate with the County plan.										
2023-Town of Lake George-007	Flood Management Plan	4	Flood	<b>Problem:</b> Current floodplain mapping is considered inadequate and requires more data and detail. <b>Solution:</b> The Town is working with the LC-LGRP to secure funding to develop a Southern Basin Flood Management Plan. The Plan will include a high-level summary of at-risk facilities and structures.	No	None	Within 5 years	Planning Dept., LC-LGRP	Medium	Better flood data, floodplain mapping	LGRP, BRIC, PDM, Town budget	High	LPR	PR
2023-Town of Lake George-008	NYS Wildland Fire Suppression Training	3	Wildfire	<b>Problem:</b> Additional training for wildfire response is needed for Town officials. <b>Solution:</b> The Town will send a representative to the NYS Wildland Fire Suppression Training.	No	None	Within 5 years	Fire Dept, Town Supervisor	Staff time	Increased wildfire emergency response capabilities	Town budget, NY	High	LPR	ES
2023-Town of Lake George-009	Flood Outreach	2	Flood	<b>Problem:</b> While FEMA brochures are available at Town Hall and some information is available on the Town website, additional flood outreach is needed.	No	None	2 years	FPA	Low	Increased flood awareness, NFIP coverage	Town budget	High	EAP	PI



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will expand outreach to educate specific homeowners who have property in the floodplain areas on carrying NFIP policies and other flood related initiatives.										
2023-Town of Lake George-010	FPA Training	4	Flood	<b>Problem:</b> The FPA (Director of Planning and Zoning) lacks certification and could use updated training. <b>Solution:</b> The Town will support the FPA in courses to become a Certified Floodplain Manager.	No	None	Within 5 years	Town Board, Planning Dept.	Low	Increase flood administration capabilities	Town budget	High	LPR	PR
2023-Town of Lake George-011	Engineering Assessment of Sub-Watersheds	4	Flood, Severe Storm	<b>Problem:</b> To date, two sub-watershed assessments have been completed (East side/Front Street; Lakeview Circle) but additional sub-watershed assessments should be completed to further Town-wide efforts. <b>Solution:</b> The Town will develop an engineering assessment of sub-watersheds in Town.	No	None	Within 5 years	FPA, Planning	Medium	Increased planning, identification of flood issues	BRIC, HMGP, Town budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				This will include assessing all areas of Town with issues of stormwater runoff. Results will be considered as annexes to the proposed Flood Management Plan										
2023-Town of Lake George-012	Encourage Flood Mitigation at Campgrounds	1, 2	Flood	<p><b>Problem:</b> Lake George Escapes Campground and Riverview Campground have a history of flood issues. Both have completed some work since 2017, some of which were related to stormwater runoff and/or dealing with surface water, but each would benefit from flood-proofing audits.</p> <p><b>Solution:</b> The Town will offer to complete flood-proofing audits where flood mitigation has been completed and suggest additional mitigation opportunities at each campground.</p>	No	None	Within 5 years	Town Floodplain Administrator, Planning Dept., Lake George Escapes Campground, Riverview Campground	Low for audits	Increased flood resilience of campgrounds	Town budget, Campground budgets	High	SIP	PP
2023-Town of Lake	Stormwater Improvements	1	Severe Storm, Flood	<b>Problem:</b> Stormwater flooding requires stormwater improvements to	No	May require permitting	Within 5 years	Town HIGHWAY DEPARTMENT, Planning Dept	High	Reduction in stormwater flooding	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
George-013				<p>reduce flood risk at several locations in the Town.</p> <p><b>Solution:</b> The Town will make the following stormwater improvements:</p> <ul style="list-style-type: none"><li>• Middle Road South of Carefree Lane stormwater improvements</li><li>• Michelli Drive stormwater improvements</li><li>• Middle Road North of Carefree Lane – Install a roadside buffer along the stream banks a 200' section of the brook that flows alongside Middle Road between two stream crossings. Project would increase water quality</li></ul>										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				in this stretch of brook flowing very close and parallel to Middle Road.										
2023-Town of Lake George-014	Substantial Damage Procedures	1, 3, 4	All Hazards	<p><b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.</p> <p><b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations.</p>	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal budget	High	LPR	PP, PR
2023-Town of Lake George-015	Backup Power for Old County Courthouse	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm	<p><b>Problem:</b> The Old County Courthouse is a Town owned facility that lacks a backup power source. The facility houses several Lake George Historical Association and museum, Lake Champlain Regional Planning Office, and other groups.</p>	Yes	No	Within 5 years	Engineer, Highway Department	\$20,000 – \$25,000	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Town budget	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Engineer will evaluate the Old County Courthouse to determine the proper size generator necessary to power the Old County Courthouse building. The Highway Department will oversee installation of a fixed generator and necessary electrical components to supply backup power to the building. The Highway Department will be responsible for maintenance and testing of the generator following installation.										
2023-Town of Lake George-016	Comprehensive Plan Integration	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<p><b>Problem:</b> An update to the Town Comprehensive Plan is needed in the next few years.</p> <p><b>Solution:</b> During the update process, the Town will integrate information from the hazard mitigation plan regarding hazard areas and safe development practices.</p>	No	None	2 years	Administration	Low	Increased integration and planning for smart growth	Town budget	High	LPR	PR



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Lake George-017	Staff Training for Dam Failure	3	Dam Failure	<b>Problem:</b> Staff require training to respond to dam failure events. There are several privately owned dams including Big Hollow Reservoir, Gage Brook Reservoir, and Orebed Reservoir. <b>Solution:</b> Staff responsible for emergency response will undergo training for dam failure events.	Yes	None	2 years	Administration	Staff time	Increased staff capabilities	Town budget	High	EAP	ES
2023-Town of Lake George-018	Expanded Hazard Outreach	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> There is a general lack of public awareness regarding hazards and response. Although the Town completes outreach related to hazards, improvements can be made to encourage better personal mitigation and education for children. <b>Solution:</b> The Town will consider and implement various new approaches to outreach including hosting public workshops, holding informational sessions, or improving the Town's	No	None	1 year	Administration	Low	Increased public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				website page for Hazard mitigation and response. Outreach will also focus on the importance of hazard awareness and planning for seasonal residents and tourists. The Town will educate residents regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earth-quakes, and all other natural hazards) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities.										
2023-Town of Lake George-019	Lower Pump Station Stormwater Protection	1	Flood, Severe Storm	<b>Problem:</b> Critical infrastructure for the sewer district has been compromised by the elevated Beach Road, which creates direct runoff towards the	Yes	None	Within 5 years	Administration, NYS DEC, Highway Department	Medium	Reduction in flood risk to Lower Pump Station to maintain critical services	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>Caldwell Lower Pump Station.</p> <p><b>Solution:</b> The Town will work with the DEC to either install stormwater management controls to direct runoff away from the pump station, or to help it infiltrate before it reaches the pump station doors.</p>							Program, Town Budget			
2023-Town of Lake George-020	Home Elevations	1	Flood, Severe Storm	<p><b>Problem:</b> There are a few properties that are within the Schroon River flood zone, but the Town is unaware of their status in terms of repetitive loss or flood insurance claims. Some property along the River or along English Brook would likely benefit from either.</p> <p><b>Solution:</b> The Town will survey properties in floodprone areas to understand elevation needs. The Town will work with homeowners to consider elevations of buyouts.</p>	No	None	Within 5 years	FPA, homeowners	High	Reduction in flood risk to residential structures	FMA, HMGP, BRIC, PDM, homeowner cost-share	High	SIP	PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.



## Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
HIGHWAY DEPARTMENT	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

## Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

## Timeline:

The time required for completion of the project upon implementation.

## Cost:

The estimated cost for implementation.

## Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

## Critical Facility:

Yes  Critical Facility located in 1% floodplain

## Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

## CRS Category:

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.





The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.8-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Lake George-001	Hazard Mitigation Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-002	StormReady Program	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-003	Stormwater Retrofit Fund	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-004	Mutual Aid Agreements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-005	NYS DEC and Town Maintenance Agreements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-006	Debris Management Plan	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-007	Flood Management Plan	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2023-Town of Lake George-008	NYS Wildland Fire Suppression Training	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High



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Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Lake George-009	Flood Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Lake George-010	FPA Training	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-011	Engineering Assessment of Sub-Watersheds	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-012	Encourage Flood Mitigation at Campgrounds	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Lake George-013	Stormwater Improvements	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-014	Substantial Damage Procedures	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Lake George-015	Backup Power for Old County Courthouse	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Lake George-016	Comprehensive Plan Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-017	Staff Training for Dam Failure	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Lake George-018	Expanded Hazard Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Lake George-019	Lower Pump Station Stormwater Protection	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Lake George-020	Home Elevations	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.8.8 Action Worksheets

The following action worksheets were developed by the Town of Lake George to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Backup Power for Old County Courthouse		
<b>Project Number:</b>	2023-Town of Lake George-015		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm		
<b>Description of the Problem:</b>	The Old County Courthouse is a Town owned facility that lacks a backup power source. The facility houses several Lake George Historical Association and museum, Lake Champlain Regional Planning Office, and other groups.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will evaluate the Old County Courthouse to determine the proper size generator necessary to power the Old County Courthouse building. The Highway Department will oversee installation of a fixed generator and necessary electrical components to supply backup power to the building. The Highway Department will be responsible for maintenance and testing of the generator following installation.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$20,000 - \$25,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Town budget
<b>Responsible Organization:</b>	Engineer, Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Backup Power for Old County Courthouse	
<b>Project Number:</b>	2023-Town of Lake George-015	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of numerous agencies.
Property Protection	1	Project will protect buildings from power loss.
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Highway Department
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
<b>Project Name:</b>	Lower Pump Station Stormwater Protection		
<b>Project Number:</b>	2023-Town of Lake George-019		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Critical infrastructure for the sewer district has been compromised by the elevated Beach Road, which creates direct runoff towards the Caldwell Lower Pump Station.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Town will work with the DEC to either install stormwater management controls to direct runoff away from the pump station, or to help it infiltrate before it reaches the pump station doors.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk to Lower Pump Station to maintain critical services
<b>Useful Life:</b>	TBD by feasibility assessment	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	TBD by feasibility assessment	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Town Budget
<b>Responsible Organization:</b>	Administration, NYS DEC, Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Relocate pump station	N/A	Not possible
	Build levee around facility	N/A	No space for full levee system
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Lower Pump Station Stormwater Protection	
<b>Project Number:</b>	2023-Town of Lake George-019	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Maintain critical services
Property Protection	1	Project will protect Lower Pump Station from flood damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood, Severe Storm
Timeline	0	Within 5 years
Agency Champion	1	Administration, NYS DEC, Highway Department
Other Community Objectives	1	Protection of critical services
Total	11	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.9 VILLAGE OF LAKE GEORGE

This section presents the jurisdictional annex for the Village of Lake George that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Village participated in the planning process, an assessment of the Village of Lake George's risk and vulnerability, the different capabilities used in the Village, and an action plan that will be implemented to achieve a more resilient community.

#### 9.9.1 Hazard Mitigation Planning Team

The Village of Lake George identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Village departments, including the Planning and Zoning Department and the Highway Department and Department of Public Work. The Director of Planning and Zoning represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.9-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Ray Perry, Mayor Address: P.O. Box 791, Village of Lake George, NY 12845 Phone Number: 518-668-5771 Email: <a href="mailto:mayor@villageoflakegeorge.us">mayor@villageoflakegeorge.us</a>	Name/Title: Keith Lanfear, Superintendent of Public Works Address: P.O. Box 791, Village of Lake George, NY 12845 Phone Number: 518-796-6378 Email: <a href="mailto:lgdpw@hotmail.com">lgdpw@hotmail.com</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: Dan Barusch – Director of Planning and Zoning Address: 20 Old Post Road, Lake George, NY 12845 Phone Number: 518-668-5722 Ext.5 Email: <a href="mailto:dbarusch@lakegeorgetown.org">dbarusch@lakegeorgetown.org</a>	
<b>Additional Contributors</b>	
Name/Title: Robert Blais – Former mayor	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided data and information	
Name/Title: John Helms – DPW Foreman	
Method of Participation: Provided data and information	
Name/Title: Dan Barusch – Director of Planning and Zoning	
Method of Participation: Provided information on past events, building permits, capabilities, NFIP administration, status update on previous actions	
Name/Title: Keith Lanfear – Superintendent	
Method of Participation: Provided feedback on risk rankings, contributed to mitigation strategy	

## 9.9.2 Municipal Profile

The Village of Lake George is a Village in the Town of Lake George in Warren County. It is situated on the shores of Lake George. The Village has a total area of 0.6 square miles all of which is land

According to the U.S. Census, the 2020 population for the Village of Lake George was 1,008, an 11.3 percent increase from the 2010 Census. Data from the 2020 U.S. Census indicate that 3.3 percent of the population is 5 years of age or younger and 21.4 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Village of Lake George has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 8.38% of the population does not have a high school diploma
- 14.96% of the population has a disability
- 5.20% of households do not have a vehicle
- 4.94% of the population is living below the poverty level
- 1.48% of the population is unemployed

## 9.9.3 Jurisdictional Capability Assessment and Integration

The Village of Lake George performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.



For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Village of Lake George to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Village of Lake George. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.9-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	Village of Lake George Code Chapter 78 (Building Construction); Warren County Code Chapter 150 (State Uniform Fire Prevention and Building Code);	Local, County	Planning and Zoning; Warren County Fire Prevention and Building Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Village adopted the New York State Uniform Fire Prevention and Building Code, but has the County administer and issue Building Permits on behalf of the Village.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 220 – Zoning	Local	Planning and Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance works in accordance with the Comprehensive Development Plan and is designed to promote the health, safety, morals and general welfare of the Town and to lessen congestion in the streets, to secure safety from fire, panic and other dangers, to provide adequate light and air, to avoid undue concentrations of population and to facilitate adequate provisions of the transportation, water, sewerage, schools, parks.				
<b>Subdivision Ordinance</b>	Yes	Chapter §220-10 (Subdivision)	Local	Planning and Zoning Office, Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Planning Board is empowered to approve plats. The Planning Board of the Village of Lake George is authorized and empowered to approve plats showing lots, blocks or sites, with or without streets or highways, to approve the development of entirely or partially undeveloped plats already filed in the office of the county clerk and to conditionally approve preliminary plats, within the Village of Lake George.				
<b>Site Plan Ordinance</b>	Yes	Chapter 220, Article VII (Site Plan Review)	Local	Planning and Zoning Office, Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The ordinance provides for the review of development through Site Plan Review by Planning Board, which assesses all potential impacts of and on development.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Stormwater Management Ordinance</b>	Yes	Chapter 220, Article IX (Stormwater Management Regulations)	Local	Planning and Zoning Office; Village of Lake George Department of Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Ordinance is to protect and safeguard the general health, safety, welfare of the public residing in or visiting the Village by preserving and protecting the quality of the ground and surface waters by the following means: A. Prevent any increase in stormwater runoff from any development in order to reduce flooding, siltation and stream bank erosion B. Prevent any increase in pollution caused by stormwater runoff from development which would otherwise degrade the quality of water in Lake George and its tributaries and render it unfit for human consumption, interfere with water-based recreation or adversely affect aquatic life C. Prevent any increase in total annual volume of surface water runoff which flows from any specific site during and following development above that which prevailed prior to development D. Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Storm Water Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, or as amended or revised E. Require land development activities to conform to the substantive requirements of the New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	Yes	Chapter 201 - Trees	Local	Tree Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In order to establish a responsible program for planting, maintenance, husbandry, or removal of trees or shrubs in the Village, the Board of Trustees finds it necessary to establish and to adopt this Local Law to provide an orderly framework to maximize the benefits afforded by trees within the Village.				
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 114 - Flood Damage Prevention, 1996	Local	Planning and Zoning Office, Floodplain Administrator
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li><li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands</li><li>F. Qualify and maintain for participation in the National Flood Insurance Program</li></ul>				
The chapter requires update to meet the state's 2 foot freeboard requirements.				
Wellhead Protection	No	-	-	-
Emergency Management Ordinance	No	-	-	-
Climate Change Ordinance	No	-	-	-
Other	Yes	Stream Corridor Management Regulations for the Lake George Park (220-44 in Lake George Village Code)	State/Local	Lake George Park Commission ; Planning and Zoning Office
How has or will this be integrated with the HMP and how does this reduce risk? The Stream Corridor Management Regulations that were adopted by the LGPC were also adopted by the Village of Lake George in 2022 with the revised Stormwater Management Regulations package. Additional buffer requirements will restrict any and all development or clearing of vegetative buffer at least 35' from all classified streams.				
<b>Planning Documents</b>				
Comprehensive Plan	Yes	Village of Lake George Comprehensive Plan (2004)	Local	Planning and Zoning Office, Village Board
How has or will this be integrated with the HMP and how does this reduce risk? The Comprehensive Plan guides long term development in the Village. The Plan needs updating, and the update should have a section/element on hazards and emergencies/response, etc. It could also look at growth limitations or other regulations in vulnerable areas.				
Capital Improvement Plan	No	-	-	-
Disaster Debris Management Plan	No	-	-	-
Floodplain Management or Watershed Plan	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Stormwater Management Plan</b>	Yes	Village of Lake George Stormwater Management Program (SWMP) Plan	Local	Planning and Zoning Office, Department of Public Works
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Stormwater Management Plan outlines activities to address stormwater education, outreach, and implementation under the state requirements within the designated Urbanized Areas, as determined by the Census. The Plan documents the current efforts undertaken and planned by the Village.</p>				
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	Yes	Lake George Economic Development Plan (2017)	Local	Planning and Zoning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Other than discussion on incorporation of enhanced and upgraded utilities as part of any additional development to occur in the economic development zone(s), there is not much in relation to risk reduction in the Economic Development Plan.</p>				
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/Resiliency/Sustainability Plan</b>	Yes	Lake George Climate Action Plan (2020)	Local	Planning and Zoning Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Joint Town-Village Climate Action Plan addresses several things related to hazard and risk reduction and adapting to Climate Change and the adverse impacts it poses on the community. Several projects / actions identified in the CAP are related to infrastructure right-sizing, analyzing storm size for potential municipal infrastructure projects, and suggested policies to help encourage low impact development and other tools to deal with impacts of hazards from Climate Change.</p>				
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	County	Warren County OES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The County Comprehensive Emergency Management Plan (CEMP) enhances the County's ability to manage emergency/disaster situations. The Plan outlines a comprehensive approach to risk reduction before a disaster or emergency and identifies short and long-term recovery goals.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan (Section 4)	County	Warren County OES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Section IV of the County CEMP identifies the roles and responsibilities of communities prior to and after an emergency event.				
<b>Public Health Plan</b>	No	-	-	-
<b>Other</b>	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Village of Lake George to oversee and track development.

**Table 9.9-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"> <li>If you issue development permits, what department is responsible?</li> </ul>	N/A	Planning and Zoning issues Local Village Permits (and Zoning Compliance Certificates)
<ul style="list-style-type: none"> <li>If you do not issue development permits, what is your process for tracking new development?</li> </ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain Development Permits are required but only in identified FEMA flood zones/floodplains, not in localized flood-prone areas. No floodplain permits issued since at least 2017.



Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you have a buildable land inventory?	Yes	-
<ul style="list-style-type: none"> <li>If you have a buildable land inventory, please describe</li> </ul>	N/A	Part of the LGA Data Atlas identifies building land inventory on a large/broad scale
Describe the level of build-out in your jurisdiction.	N/A	Build out analysis also included in the Data Atlas. The Village is assumed to be near 85-90% build-out based on undeveloped land.

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Lake George and their current responsibilities that contribute to hazard mitigation.

**Table 9.9-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board reviews those applications for projects in the Village for which the Village Code requires review.
Zoning Board of Appeals	Yes	The Zoning Board of Appeals shall be appellate only and shall be limited to hearing and deciding appeals from and reviewing any order, requirement, decision, interpretation, or determination made by the Zoning Officer.
Planning Department	Yes	<p>The Planning and Zoning Office administers the Zoning Code and other Land Use Regulations of the Village of Lake George.</p> <p>This office works with the Planning Board and the Zoning Board of Appeals in regulating development throughout the Village, and focuses on the following additional duties:</p> <ul style="list-style-type: none"> <li>Hazard Mitigation Planning</li> <li>Climate Resiliency and Energy Efficiency Planning</li> <li>Historic Preservation Planning</li> <li>Parks, Trails and Recreation Planning</li> <li>Economic Development</li> <li>Stormwater Management and MS4 Program Administration assistance</li> <li>Floodplain Management</li> <li>Grant writing, administration, and management</li> <li>Housing Development and Assistance</li> </ul>
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	"Go Green Committee" Town of Lake George Consolidated Board of Health
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Public Works Department is responsible for all roadways, and other public facilities in the Village,



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		including water and sewer infrastructure and public buildings.
Construction/Building/Code Enforcement Department	Yes	See Planning Department
Emergency Management/Public Safety Department	Yes	Town of Lake George Emergency Squad Lake George Village Volunteer Fire Department
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Lake George Volunteer Fire Department Mutual Aid Plan; Lake George EMS Mutual Aid
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning; Code Enforcement Officer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning; Town of Lake George Town Engineer – Private (LaBella)
Planners or engineers with an understanding of natural hazards	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning
Staff with expertise or training in benefit/cost analysis	Yes	Director of Planning and Zoning
Professionals trained in conducting damage assessments	Yes	Most of the Public Works Department is “unofficially trained through experience”
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning; Town of Lake George Town Engineer – Private (LaBella)
Environmental scientist familiar with natural hazards	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning
Surveyor(s)	No	-
Emergency Manager	Yes	Village Mayor
Grant writer(s)	Yes	Village of Lake George Planning and Zoning Office; Director of Planning and Zoning
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Stormwater Management Officer (DPW Superintendent); Floodplain Administrator (Director of Planning and Zoning)
<b>Administrative/technical capability self-assessment</b>		
<b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b>		
Administrative and Technical capabilities allow the Village to easily integrate both mitigation and adaptation projects and undertakings in the Village in relation to risks and associated hazards from the HMP. The Public Works Department		



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
is continuously working to mitigate impacts of storms and hazards to the Town roads through infrastructure upgrades and rightsizing, and the Planning Department continues to work on cross-integration between all planning disciplines, with goals of incorporating hazards and other potential risks into the various planning documents and efforts in the Village such as within the Climate Action Plan and the Stormwater Management Program/Plan. In 2023, a potential Southern Basin Floodplain Management Plan will be developed in conjunction with the LC-LGRPB.		

## Fiscal Capability

The table below summarizes financial resources available to the Village of Lake George.

**Table 9.9-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Lake George.

**Table 9.9-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	–
Personnel skilled or trained in website development	No	–
Hazard mitigation information available on your website	Yes	Warren County Hazard Mitigation link on website
Social media for hazard mitigation education and outreach	No	–
Citizen boards or commissions that address issues related to hazard mitigation	No	–
Warning systems for hazard events	No	–
Natural disaster/safety programs in place for schools	No	–



Outreach Resources	Available? (Yes/No)	Comment:
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"> <li>If yes, please describe.</li> </ul>	Yes	The municipality pairs up with the LGPC for public outreach.

## Community Classifications

The table below summarizes classifications for community programs available to the Village of Lake George.

**Table 9.9-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	September 1, 2014
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Passed CSC Pledge, Certified	2012 Certified (2020)
Storm Ready Certification	No	(Warren County is StormReady)	–
Firewise Communities classification	No	–	–
Other	No	–	–

Note:

N/A Not applicable  
– Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.9-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate



Hazard	Adaptive Capacity – Strong/Moderate/Weak
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.9.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

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

The following table summarizes the NFIP statistics for the Village of Lake George.

**Table 9.9-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Village of Lake George	2	13	\$503,746	1	1	1

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

#### Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Village of Lake George.

**Table 9.9-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	The Village does not maintain a list of properties per se, however it is understood that a small sliver (5' +/-) of each property adjacent to the lakeshore in the Village fall within Zone AE.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No, the Village does not identify property owners interested in mitigation. Aside from seawall structures and certain lakeshore amenities, not many properties have structures in the floodplain.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	FEMA did a RiskMAP Analysis for the Upper Hudson Watershed in 2018/2019, and are working separately on a Warren County Flood Hazard Study in 2022.



NFIP Topic	Comments
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	The Village does not have a staff person who is authorize to make substantial damage estimates
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	Based on records, none of the (two dozen or so) properties that have some land within the mapped FEMA flood zone AE have been mitigated/elevated/acquired.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No they do not. The only Flood zone maps from FEMA are in relation to the geographic bounds of Lake George. There are many other flood prone areas in the Village, particularly adjacent to major tributaries of Lake George, and the Village hopes to work on a Floodplain Management Plan with the Town of Lake George to preempt any potential FIRM updates/map amendment requests.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Planning and Zoning Office (Director of Planning and Zoning)
Are any certified floodplain managers on staff in your jurisdiction?	The Director of Planning and Zoning acts as the Floodplain Administrator, but is not a CFM.
Do you have access to resources to determine possible future flooding conditions from climate change?	Not directly, no.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	The FPA is adequately supported and trained. The FPA would consider additional training/certifications when available.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	<p>Zoning staff conduct routine inspections on properties within the floodplain (along the lakeshore); assist with damage assessments conducted by Lake George Department of Public Works / Highways when damages are recorded; and have recently started educating specific applicants that may lie within / near floodplains within Lake George. The Director of Planning and Zoning also works on floodplain development permit review when/if they are submitted (none submitted to date since 2017). Education and Outreach on the topic is less than adequate.</p> <p>The Village performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Village, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Village. Upon receipt of a signed zoning compliance certificate, the county performs the code.</p>
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Consultation with NFIP documents, the Village's Flood Damage Prevention Ordinance (Ch. 114), and the Village's Engineer /Counsel as applicable/needed.





NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	The program is in good shape and good standing with NFIP, but improvements could be made to the education/outreach aspects.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"><li>If so, state the violations.</li></ul>	The Village is in good standing with NFIP compliance far as the Village is aware.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	According to State records, the Village has not had a CAV completed.
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"><li>What is the date that your flood damage prevention ordinance was last amended?</li></ul>	The Village's Flood Damage Prevention Ordinance, Chapter 114 of the Village Code. Originally adopted date is unknown, but assumed to be post-1996 based on FIRM map date. Could use amendments.
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"><li>If exceeds, in what ways?</li></ul>	Meets minimum requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	<p>Any applications that go through the Planning and Zoning Office, including Area/Use variances, Site Plan Reviews, and Land Use and Development permits, are all considered for flood permit review (only deemed necessary if the parcel and any portion of the proposed project itself falls within the floodplain boundaries).</p> <p>Other plans or programs that support floodplain management include our stormwater management program plan, our stormwater regulations located in Village Code Chapter 220, which include strict stormwater mitigation measures and standards for all projects located within the Village. Consistently the Village Planning Board requires stormwater control measures for projects in order to help reduce flood risk and control stormwater runoff.</p>
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Village would be interested in seeing what was involved with becoming part of the CRS program, but due to limited resources it may not be feasible to participate, depending on level of involvement or recurring work required.

### 9.9.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.9-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.9-11. Recent and Expected Future Development**

Type of Development	2017	2018	2019	2020	2021	2022
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)						



Type of Development	2017		2018		2019		2020		2021		2022	
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	Unknown	Unknown	12	0	15	0	8	0	15	0	8	0
Multi-Family	Unknown	Unknown	1	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	Unknown	Unknown	11	0	16	0	10	0	13	0	11	0
<b>Total New Construction Permits Issued</b>	<b>Unknown</b>	<b>Unknown</b>	<b>24</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>19</b>	<b>0</b>

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
<b>Recent Major Development and Infrastructure from 2017 to Present</b>					
None identified					
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
English Brook Village	Multi-family residential	16 units / 4 structures	511 Canada Street	Adjacent to English Brook	Final engineering review, permits pending

SFHA Special Flood Hazard Area (1% flood event)

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

Dan Barusch took over Planning and Zoning in December 2017. Prior to that, records were not kept cumulatively or distinctly.

\*\* Permit spreadsheet/table does not necessarily differentiate between residential and commercial projects, so assumptions/estimates were used. 19 permits for 2022 is from 1/1/22 to 11/23/22 (Assume another 2+/- permits before 12/31/22)

## 9.9.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Village of Lake George's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Village of Lake George has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.



Figure 9.9-1. Village of Lake George Flood Hazard Area Extent and Location Map

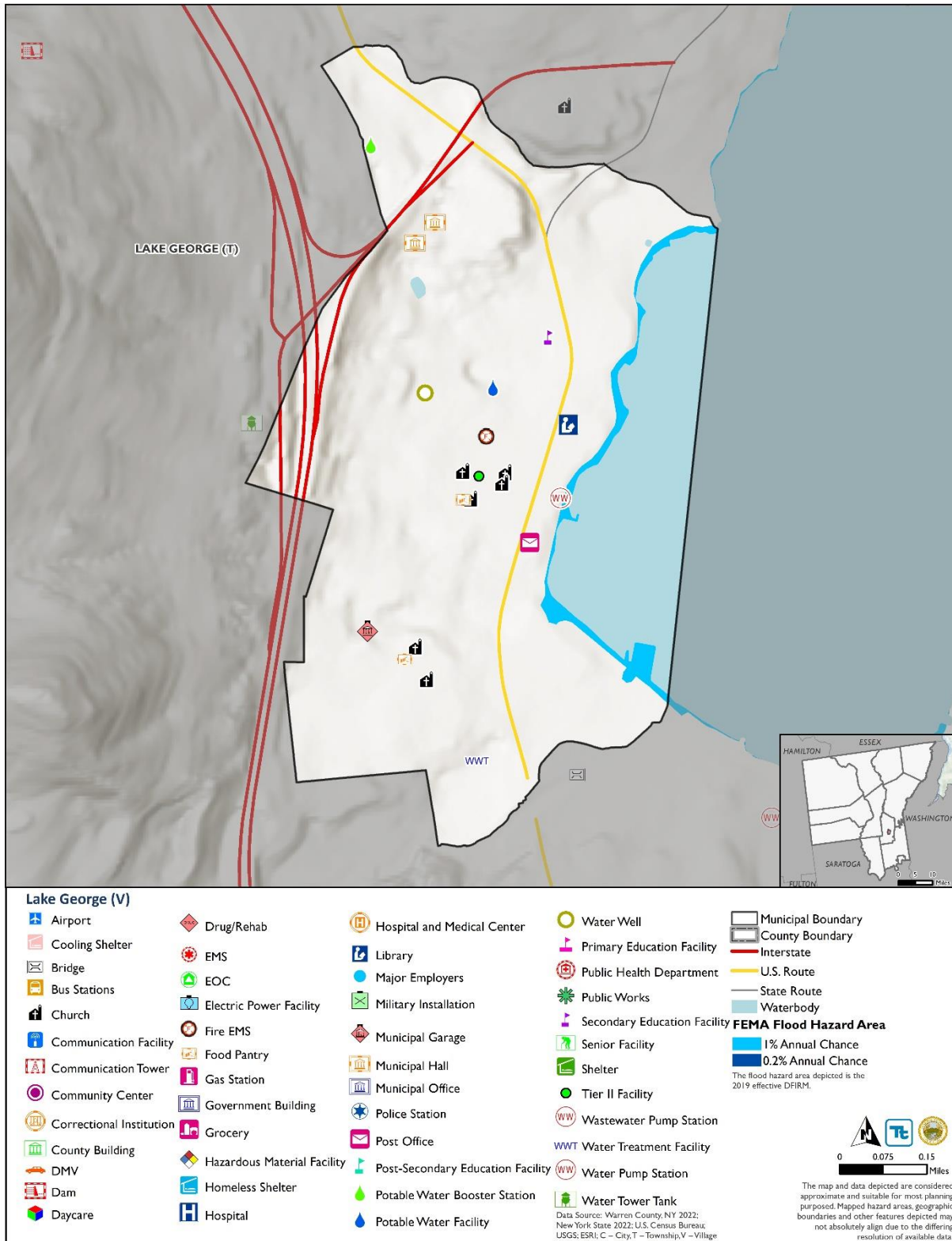




Figure 9.9-2. Village of Lake George Earthquake (Soil Class) Hazard Area Extent and Location Map

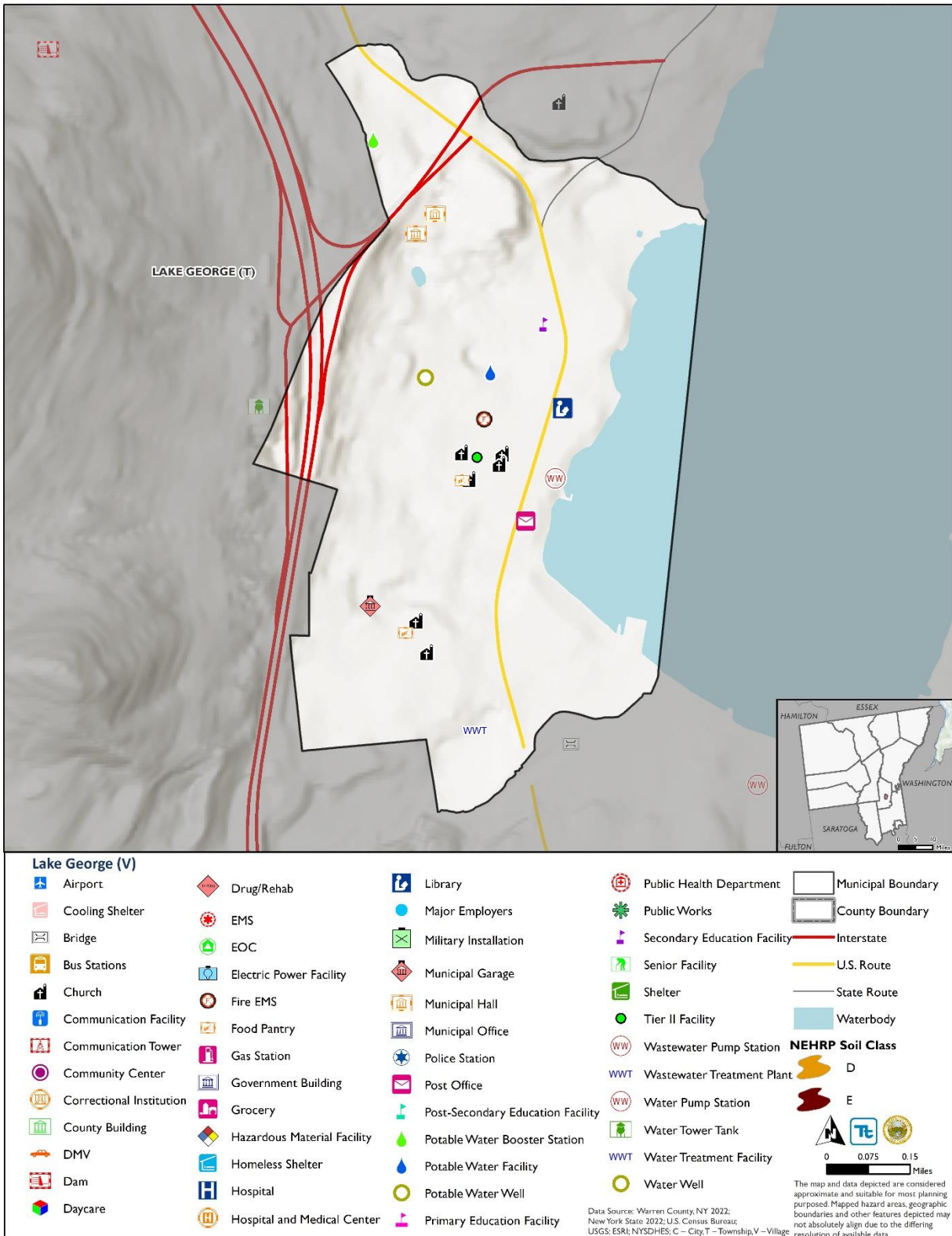
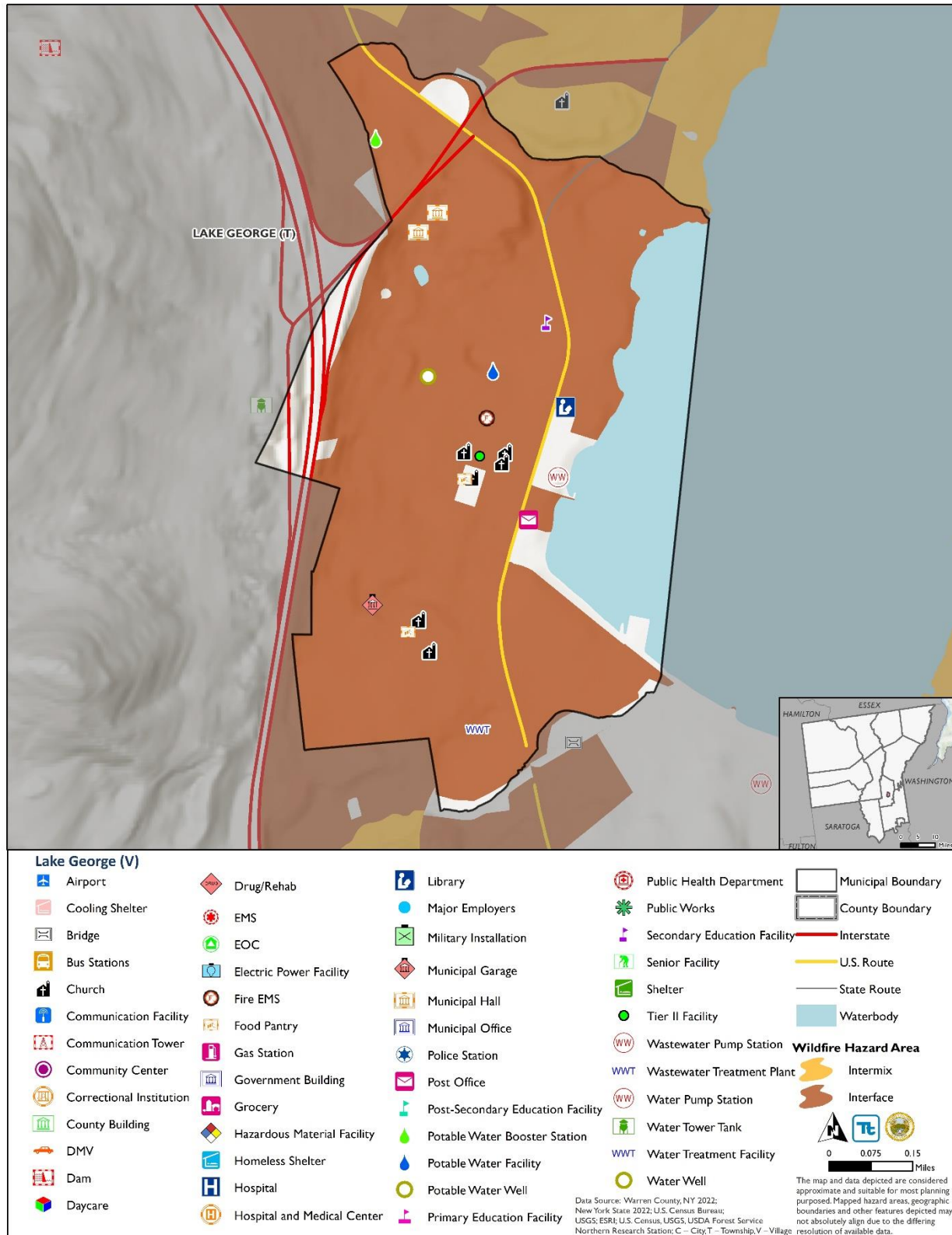






Figure 9.9-3. Village of Lake George Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Village of Lake George's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.9-12 provides details regarding municipal-specific loss and damages the Village experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.9-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
May 4, 2018	Thunderstorm Wind	Yes	A powerful low pressure system formed on May 4th, pushing a strong cold front across eastern New York. A line of thunderstorms developed along this front in the afternoon and evening, resulting in widespread wind damage. Nearly 60,000 customers lost power as a result of the storms. Particularly intense damage occurred in the villages of Johnstown and Cambridge, the town of Hebron, and Saratoga National Historical Park, where dozens of trees were uprooted and snapped in concentrated swaths. Some of these trees fell onto cars and houses, resulting in property damage. the evening hours, strong non-thunderstorm winds developed behind the cold front, impacting portions of the southern Adirondacks. Winds gusted as high as 58 mph at Chestertown, and a few trees and limbs were downed.	Localized downed trees and wires and power outages, but no known damages.
October 31, 2019	Flooding "Halloween Storm" (DR-4472)	Yes	2-4" of rain fell causing localized flooding and scattered areas of damage to public and private property	Minor localized flooding from some stormwater systems and minor damage to local roadways,



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
				larger damage to private properties (Howard Johnsons Motel).
September 8, 2021	Thunderstorm Wind	No	A line of strong to severe thunderstorms resulted in widespread damage over eastern New York on Wednesday September 8, 2021.	A trained weather spotter reported numerous trees snapped and uprooted along Exit 22 north of 9N.
January 20, 2022	Covid-19 pandemic (DR-4480, EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19.	The Village was subject to closures and masking/social distancing requirements.
February 18, 2022	Flood	No	A storm system pushed across the region during February 17-18, 2022. Warm air pushed northward into the region along with periods of rainfall before a cold front brought the return of windy and colder weather. A convective line of gusty showers also accompanied the cold frontal passage. Some locations picked up over 1 inch of rainfall which led to minor flooding in a few locations. In the wake of the cold front, strong winds affected areas mainly along and south of I-90 with gusts 40 to 55 mph observed, resulted in a few downed trees. The warm and rainy weather ahead of the cold front resulted in some snow melt as well as some ice to break up on area rivers and streams. As the colder weather returned, localized ice jams formed, some of which led to flooding, including in Dolgeville and Canajoharie.	The Howard Johnson by Wyndham Lake George hotel parking lot on Canada Street was flooded early Friday morning. The Lake George Volunteer Fire Department rescued a man who was trapped on top of his pickup truck in the flooded parking lot. Lake George Fire Chief said the flooding was a result of water runoff from Prospect Mountain that flows into the drainage portion of the parking lot which wasn't able to keep up with the amount of water coming in. There was about 8 feet of water in the parking lot. The rooms on the ground level of the hotel also flooded with water.

## Notes:

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

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Village of Lake George's risk assessment results and data used to determine the hazard ranking.





## Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Village of Lake George. The Village of Lake George reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Village indicated the following:

- The Village changed the hazard ranking for disease outbreak from low to medium, noting that the Village has higher population density that could allow for the spread of disease.
- The Village agreed with the remainder of the calculated hazard rankings.

**Table 9.9-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Medium	Low	High	High	High	Medium

Dam Failure	Disease Outbreak
Low	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

## Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).



The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.9-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
None Identified.					

Source: Warren County 2022

## Identified Issues

After review of the Village of Lake George's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Village of Lake George identified the following vulnerabilities within their community:

- The Comprehensive Plan requires update. Updates should integrate hazard mitigation information and information from the Lake George Climate Action Plan.
- The Village has an informal agreement for use of the Elementary School and High School for sheltering but a formal agreement needs to be established.
- Numerous critical facilities in the Village lack backup power. Critical facilities require backup power to maintain essential functions during and after disaster events.
- Bradley Street pump station is vulnerable to flooding.
- Current public outreach on hazards and hazard mitigation is limited.
- The Village's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- Improved floodplain management is needed in the Village to guide development, flood mitigation, and provide better flood data.
- Several projects / actions identified in the CAP are related to infrastructure right-sizing related to changes from climate change.
- Schuyler Street Culvert is undersized. Causing localized flooding.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- The Village lacks a disaster debris management plan.

### 9.9.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.



### **Past Mitigation Initiative Status**

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The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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**Table 9.9-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
VLG-1	Work with property owners to mitigate flood risk to repetitively damaged properties, including providing non-financial assistance to property owner to secure mitigation funding as available, at property owner request.	Flood	General issue	Village and WCWSD	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
VLG-2	Provide direct outreach to Motel 6 property owner to consider structural and non-structural mitigation measures to reduce repetitive flooding to roughly 12 units on lower level. Provide non-financial assistance to property owner to secure mitigation funding as available, at property owner request.	Flood	Specific localized flooding on private property	Village and WCWSD	Complete	Cost	\$100,000	1. Discontinue
						Level of Protection	Full	2.
						Damages Avoided; Evidence of Success	Success – no floods or backups on property since work completed. Assumed repeated damages avoided.	3. While long term upstream measures have not been implemented, in March 2022 the property owner remedied the failed culvert underneath the property, alleviating the flooding on site and ameliorating future potential flood damage.
VLG-3	Develop and implement a plan to	Flood	General issue	Village	No Progress	Cost		1. Discontinue
						Level of Protection		



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	collaborate with private property owners to reduce risks from beaver dams.					Damages Avoided; Evidence of Success		2. 3. The Village is unaware of any beaver dams located in the Village or even proximate. Damage can occur from this damming far upstream in the Town, but this is not of direct concern to the Village at this time.
VLG-4	Identify opportunities to incorporate hazard mitigation strategies into the stormwater management program.	Flood	General planning issue	Planning and Zoning; Village DPW	Ongoing Capability	Cost	Level of Protection	1. Discontinue 2. 3. Ongoing capability
VLG-5	Participate in the development and implementation of a County-wide Debris Management Plan – on County's five-year plan.	All Hazards	General planning issue	Planning and Zoning; Village DPW	No Progress	Cost	Level of Protection	1. Include in 2023 HMP 2. 3.
VLG-6	Provide training for Village staff with respect to ice storm risk management.	Ice, Winter Storm	General hazard training	Village DPW	Ongoing Capability	Cost	Level of Protection	1. Discontinue 2. 3. Ongoing capability. Training has occurred, and will continue
VLG-7	Expand Village website to include links to information on natural hazard and risk management.	All Hazards	General educational / informational item	Village DPW	Ongoing Capability	Cost	Level of Protection	1. Discontinue 2. 3. Ongoing capability. Website has links to the Town website with Hazard Mitigation information. Some updates have been made.
		All Hazards			In Progress	Cost		1. Include in 2023 HMP



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Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status Progress, Ongoing, Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Level of Protection	Damages Avoided; Evidence of Success	
VLG-8	Establish a formal agreement with the Elementary School and High School to designate those facilities as emergency shelters.		General hazard planning partnership	Mayor / Village Board				2. 3. Unknown at this time if this was completed, but it should be.
VLG-9	Look into backup power needs for senior housing facilities, including Hunter's Run.	All Hazards	Unknown	Village Trustees	No Progress	Cost		1. Include in 2023 HMP 2. No progress. Could include other facilities such as emergency shelters, public facilities, etc. 3.
VLG-10	Bradley Street Pump Station Elevation	Flood	Potential for pump station flooding	Water Dept.	In Progress	Cost		1. Include in 2023 HMP 2. 3.
VLG-11	Review and update local plans to integrate goals, objectives, and activities from this HMP which are not found in existing regulatory documents, as appropriate.	All Hazards	General planning issue	Planning Board	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.9-15, the Village of Lake George identified the following mitigation efforts completed since the last HMP:

- The municipality purchased a new Jetter –Vac Truck for use.

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Village of Lake George participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.9-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X		X	X
Flood	X	X		X	X	X	X		X	X
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm	X	X		X	X	X	X		X	X
Wildfire	X	X		X	X	X	X			X
Infestation	X	X		X	X	X	X			X
Dam Failure	X	X		X	X	X	X			X
Disease Outbreak	X	X		X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.9-17).

The table below summarizes the specific mitigation initiatives the Village of Lake George would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.





Table 9.9-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Village of Lake George-001	Comprehensive Plan Update	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Comprehensive Plan requires update. Updates should integrate hazard mitigation information and information from the Lake George Climate Action Plan. <b>Solution:</b> During the Comprehensive Plan update, the Village will include a section/element on hazards and emergencies/response, etc. The update will consider suggested policies from the Lake George Climate Action Plan to help encourage low impact development and other tools to deal with impacts of hazards from climate change. The Plan will also consider growth	No	None	Within 5 years	Village FPA, WCWSD	Low	Increased integration of hazard mitigation concepts	Village budget	High	LP R	PR



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				limitations or other regulations in vulnerable areas.										
2023-Village of Lake George-002	Sheltering Agreements	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Village has an informal agreement for use of the Elementary School and High School for sheltering but a formal agreement needs to be established. <b>Solution:</b> The Village will establish a formal agreement with the Elementary School and High School to designate those facilities as emergency shelters.	Yes	None	1 year	Mayor / Village Board, School District	Staff time	Sheltering formal agreements established	Village budget	High	LP R	PR, ES
2023-Village of Lake George-003	Critical Facility Backup Power	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire,	<b>Problem:</b> Numerous critical facilities in the Village lack backup power. Critical facilities require backup power to maintain essential functions during and after disaster events. Facilities lacking	Yes	None	Within 5 years	Village Trustees, Facility managers	High	Protect public health and safety, and ensure continued operation of critical facility and essential functions	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category	
			Dam Failure	<p>backup power include:</p> <ul style="list-style-type: none"><li>• Senior housing facilities including Hunter's Run</li><li>• Emergency shelters</li></ul> <p>The generators will provide continuous power for services to ensure the health and safety of residents, businesses, and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen issues. Services such as heat and cooling will be uninterrupted to</p>							during power outages.	Performance Grants (EMPG) Program, Municipal Budget			



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				support the needs of vulnerable populations, community alerts and rapid inspections and monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities.  <b>Solution:</b> The Town will work with facility managers to purchase and install permanent fixed generators and necessary electrical components at each critical facility. The facility managers will be responsible for maintenance following installation.										



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Village of Lake George-004	Bradley Street Pump Station Elevation	1	Severe Storm, Flood	<b>Problem:</b> Pump station is vulnerable to flooding events. <b>Solution:</b> The Village will review the elevation of the pump station and develop a design to elevate it in accordance with floodplain regulations and will implement the project when funding is available.	Yes	None anticipated	Within 5 years	Water Department	High	Reduced flood risk	HMGP, BRIC, PDM, CHIPS, Village budget	High	SIP	SP
2023-Village of Lake George-005	Education and Outreach	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> Current public outreach on hazards and hazard mitigation is limited. <b>Solution:</b> The Village will expand outreach offerings, considering opportunities to share information on the Village website, utilize social media, and consider public workshops or meetings. The village will utilize its	No	None	2 years	Administration	Low	Increased public awareness	Village budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				social media and leverage resident communication platforms (digital and analogue) to provide hazard information including alerts, mitigation measures and explanation of code and ordinances related to hazard mitigation.										
2023-Village of Lake George-006	Flood Damage Prevention Ordinance Update	1	Flood	<p><b>Problem:</b> The Village's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.</p> <p><b>Solution:</b> The Village will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.</p>	No	None	1 year	FPA, Village Board	Staff time	Meet state standards, increased building requirements	Village budget	High	LP R	PR



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Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Village of Lake George-007	Southern Basin Floodplain Management Plan	1, 4	Flood	<p><b>Problem:</b> Improved floodplain management is needed in the Village to guide development, flood mitigation, and provide better flood data.</p> <p><b>Solution:</b> In 2023, a potential Southern Basin Floodplain Management Plan will be developed in conjunction with the LC-LGRP. The Village will use the Floodplain Management Plan to create the necessary flood data to provide to FEMA for updated FIRMs.</p>	No	None	2 years	FPA, Village Board, LC-LGRP.	Medium	Improved guide for development, flood mitigation, and provide better flood data.	LC-CGRP, BRIC, PDM	High	LP R	PR
2023-Village of Lake George-008	Infrastructure Right-Sizing to Meet Climate Change Challenges	1	Extreme Temperature, Severe Storm, Severe Winter Storm, Flood	<p><b>Problem:</b> Several projects / actions identified in the CAP are related to infrastructure right-sizing related to changes from climate change.</p> <p><b>Solution:</b> Using the CAP as a guide, the</p>	No	May require permitting at some locations	Within 5 years	Village Highway Department	High	Reduction in flooding, flood damages to culverts and roadways	HMGP, BRIC, PDM, CHIPS, Village budget	High	SIP	SP





## SECTION 9.9. Village of Lake George

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Village will right-size necessary infrastructure components.										
2023-Village of Lake George-009	Schuyler Street Culvert	1	Flood, Severe Storm	<b>Problem:</b> Schuyler Street Culvert is undersized. Causing localized flooding. <b>Solution:</b> The Village will review the capacity of the culvert and design improvements to increase capacity to the Schuler Street Culvert which will be implemented when funding is available.	No	None anticipated	Within 5 years	Village Highway Department, WCSWD	High	Reduction in flood risk	HMGP, BRIC, PDM, CHIPS, Village budget	High	SIP	SP
2023-Village of Lake George-010	Substantial Damage Procedures	3	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The Village will develop official procedures for Substantial	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal budget	High	LP, R	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Damage and Substantial Improvement determinations or earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazard events..										
2023-Village of Lake George-011	Participate in County-wide Debris Management Plan	3	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Village lacks a disaster debris management plan. <b>Solution:</b> The Village will participate in the development and implementation of a County-wide Debris Management Plan to address earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazard debris management..	No	None	Within 5 years	Administration, Warren County	Staff time	Plan established to address post disaster cleanup	Village budget	High	LP R	ES

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

Potential FEMA HMA Funding Sources:

Timeline:



CAV Community Assistance Visit  
CRS Community Rating System  
DPW Department of Public Works  
EHP Environmental Planning and Historic Preservation  
FEMA Federal Emergency Management Agency  
FPA Floodplain Administrator  
HMA Hazard Mitigation Assistance  
N/A Not applicable  
NFIP National Flood Insurance Program  
OEM Office of Emergency Management

FMA Flood Mitigation Assistance Grant Program  
HMGP Hazard Mitigation Grant Program  
BRIC Building Resilient Infrastructure and  
Communities Program

The time required for completion of the project upon implementation.


Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes  Critical Facility located in 1% floodplain

*Mitigation Category:*

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

*CRS Category:*

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.9-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Village of Lake George-001	Comprehensive Plan Update	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Village of Lake George-002	Sheltering Agreements	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Village of Lake George-003	Critical Facility Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Village of Lake George-004	Bradley Street Pump Station Elevation	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Village of Lake George-005	Education and Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Village of Lake George-006	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Village of Lake George-007	Southern Basin Floodplain Management Plan	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Village of Lake George-008	Infrastructure Right-Sizing to Meet Climate Change Challenges	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Village of Lake George-009	Schuyler Street Culvert	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Village of Lake George-010	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.9.8 Action Worksheets

The following action worksheets were developed by the Village of Lake George to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
Project Name:	Infrastructure Right-Sizing to Meet Climate Change Challenges		
Project Number:	2023-Village of Lake George-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Extreme Temperature, Severe Storm, Severe Winter Storm, Flood		
Description of the Problem:	Several projects / actions identified in the Climate Action Plan are related to infrastructure right-sizing related to changes from climate change.		
Action or Project Intended for Implementation			
Description of the Solution:	Using the Climate Action Plan as a guide, the Village will right-size necessary infrastructure components.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	TBD by final design	Estimated Benefits (losses avoided):	Reduction in flooding, flood damages to culverts and roadways
Useful Life:	30 years	Goals Met:	1
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	BRIC, PDM, HMGP, CHIPS, Town budget
Responsible Organization:	Village Highway Department	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Remove infrastructure	N/A	Infrastructure cannot be removed
	Relocate infrastructure	N/A	Not feasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			





Action Worksheet		
Project Name:	Infrastructure Right-Sizing to Meet Climate Change Challenges	
Project Number:	2023-Village of Lake George-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Reduction in flood damages to culverts and roadways
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Extreme Temperature, Severe Storm, Severe Winter Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Village Highway Department
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.10 TOWN OF LAKE LUZERNE

This section presents the jurisdictional annex for the Town of Lake Luzerne that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Lake Luzerne's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.10.1 Hazard Mitigation Planning Team

The Town of Lake Luzerne identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Zoning Officer and Town Supervisor. The Town Supervisor and Zoning Enforcement Officer represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.10-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Eugene J. Merlino – Town Supervisor Address: P.O. Box 370, 539 Lake Ave, Lake Luzerne, NY 12846 Phone Number: 518-696-2711 Email: <a href="mailto:supervisorlakeluzerne@hotmail.com">supervisorlakeluzerne@hotmail.com</a>	Name/Title: Ronnie Deuel – Highway Superintendent Address: P.O. Box 370, 539 Lake Ave, Lake Luzerne, NY 12846 Phone Number: 518-696-3071 Email: <a href="mailto:lakeluzernehgwydept@yahoo.com">lakeluzernehgwydept@yahoo.com</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: Karen Putney – Zoning Officer Address: P.O. Box 370, 539 Lake Ave, Lake Luzerne, NY 12846 Phone Number: 518-696-2711 Email: <a href="mailto:lakeluzerne4@albany.twcbc.com">lakeluzerne4@albany.twcbc.com</a>	
<b>Additional Contributors</b>	
Name/Title: Ronnie Deuel, Highway Superintendent	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided data and information, provided update on past events. Reviewed vulnerability of critical facilities.	
Name/Title: Karen Putney, Zoning Officer Method of Participation: Provided information on capabilities, NFIP administration, permitting. Reviewed annex. Contributed to mitigation strategy.	
Name/Title: Kristopher Kassay, Deputy Zoning Officer Method of Participation: Provided and researched information on capabilities, permitting. Provided input on risk rankings, contributed to mitigation strategy, and reviewed annex.	
Name/Title: Eugene J. Merlino, Town Supervisor Method of Participation: Reviewed annex. Contributed to mitigation strategy.	

## 9.10.2 Municipal Profile

The Town of Lake Luzerne is within the Adirondack Park in southern Warren County. It is part of the Glens Falls Metropolitan Statistical Area. The Town has a total land area of 54.1 square miles of which 52.6 square miles are land and 1.4 square miles is water. The Town is bordered by Saratoga County on the south and west, the Town of Warrensburg on the north, and the Town of Queensbury and the Town of Lake George on the west. There are six hamlets in the Town: Bearstown, Danielstown, Fourth Lake, Hartman, Lake Luzerne, and Lake Vanare. Town government is run by the Town Board as the executive, administrative and legislative body of the Town. The Town Supervisor presides over Town Board meetings and may be assigned certain powers of administration and supervision.

According to the U.S. Census, the 2020 population for the Town of Lake Luzerne was 3,079, a 8.0 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 2.6 percent of the population is 5 years of age or younger and 26.2 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Lake Luzerne has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 15.61% of the population does not have a high school diploma
- 17.88% of the population has a disability
- 5.47% of households do not have a vehicle
- 6.49% of the population is living below the poverty level
- 0.89% of the population is unemployed

## 9.10.3 Jurisdictional Capability Assessment and Integration

The Town of Lake Luzerne performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.



- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Lake Luzerne to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Lake Luzerne. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.10-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	1984 Uniform Code through the current version known as 2020 Building Code NYS	County	Warren County Fire Prevention and Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town has adopted the 2020 Building Code to ensure new development meets modern safety standards. The Warren County Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code				
<b>Zoning/Land Use Code</b>	Yes	Zoning Ordinance	Local	Planning Board, Zoning Office, and ZBA
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The overall purpose of this Ordinance is to promote the health, safety, and general welfare by regulating the density of population; and the location, intensity and use of buildings, structures and land; for trade, residence, recreation or other purposes. This also identifies parcels in the special flood plain areas.				
<b>Subdivision Ordinance</b>	Yes	Subdivision Ordinance	Local	Planning Board/ZBA
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Any division of land into two or more lots, parcels or sites, whether adjoining or not, for the purpose of sale, lease, license or any form of separate ownership or occupancy by any person is required to include a map, plat or other plan for				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
subdivision if not previously filed. The regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources.				
<b>Site Plan Ordinance</b>	Yes	Zoning Ordinance	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The ordinance identifies parcels that are in the special floodplain.				
<b>Stormwater Management Ordinance</b>	Yes	State Environment Quality Review Act (SEQRA)	State	Planning Board/ZBA/Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Stormwater management is reviewed during the SEQRA through review from the agency that is responsible.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	No	SEQRA	State	Planning Board/ZBA/Zoning Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> SEQRA identifies parcels that may have environmental impacts.				
<b>Flood Damage Prevention Ordinance</b>	Yes	Flood Damage Prevention Ordinance	Federal, Local	Zoning Office, Planning Board, Warren County Building Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li><li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands</li><li>F. Qualify and maintain for participation in the National Flood Insurance Program</li></ul>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The ordinance requires 2 feet of freeboard for all new construction.				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	No	-	-	-
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Waterfront Revitalization Strategy & Comprehensive Plan	Local	Planning Department
How has or will this be integrated with the HMP and how does this reduce risk? The Plan includes identifying community issues and attitudes, locating notable features in the Town, and assessing socioeconomic conditions and trends in the community and region. The plan will also seek to identify the issues and opportunities for growing the population; improving tourism, participating in regional economic initiatives; addressing housing, land use issues; improving recreational opportunities; and addressing community service issues including water, wastewater, roads, internet, and cell service.				
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	Yes	Watershed Plan (2000), Lake Luzerne Lake Management Plan (1/2020)	Local	Warren County Soil & Water
How has or will this be integrated with the HMP and how does this reduce risk? Watershed Plan (2000) completed by Warren County Soil & Water and Lake Luzerne Lake Management Plan (1/2020) by multiple authors.				
<b>Stormwater Management Plan</b>	No	-	-	-
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk? Much of the State land is already conserved and the Town has an open space agreement.				
<b>Economic Development Plan</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Community Wildfire Protection Plan	No	-	-	-
Community Forest Management Plan	No	-	-	-
Transportation Plan	No	-	-	-
Agriculture Plan	No	-	-	-
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	No	-	-	-
Other (for example NYRCR, etc.)	No	-	-	-
<b>Response/Recovery Planning</b>				
Comprehensive Emergency Management Plan	Yes	Emergency Plan for the Town of Lake Luzerne (4/2021)	Local	Town Supervisor
How has or will this be integrated with the HMP and how does this reduce risk? The Emergency Plan provides guidance for emergency response during disaster events.				
Continuity of Operations Plan	Yes	Emergency Plan for the Town of Lake Luzerne (4/2021)	Local	Town Supervisor
How has or will this be integrated with the HMP and how does this reduce risk? Continuity of Operations are included in the Emergency Plan for the Town of Lake Luzerne done 4/2021.				
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Public Health Plan	Yes	Cooling Station refuge (Summer of 2022) Senior center designated as a disaster refuge (Red Cross 9/2022)	Local	Red Cross
How has or will this be integrated with the HMP and how does this reduce risk?				





Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The plan allows the Town to work cooperatively with County OES to coordinate and implement services provided during either type of event. Allows direct outreach to the at-risk population.			
Other	No	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Lake Luzerne to oversee and track development.

**Table 9.10-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"> <li>If you issue development permits, what department is responsible?</li> </ul>	N/A	Zoning Office and Planning Board through land use permits and subdivision reviews.
<ul style="list-style-type: none"> <li>If you do not issue development permits, what is your process for tracking new development?</li> </ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	In the future, will add a column for parcels in the floodplain to allow tracking
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"> <li>If you have a buildable land inventory, please describe</li> </ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	The Town does not currently have this information but can work with the Warren County Planning Department in the future to develop this.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Lake Luzerne and their current responsibilities that contribute to hazard mitigation.

**Table 9.10-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	Lake Luzerne's Planning Board consists of seven members, all of whom are appointed by the Town Board of Lake Luzerne. The purpose of the Planning Board is as follows: <ol style="list-style-type: none"> <li>to assure that the development within the town is consistent with the Land Use Plan (Comprehensive Plan)</li> <li>to conduct site plan reviews as required by the Town Zoning Ordinance and review</li> </ol>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		subdivision requests as required by the Town Subdivision Code C. to make recommendations to the Zoning Board of Appeals when requested as part of the variance appeals process.
Zoning Board of Adjustment	Yes	Lake Luzerne's Zoning Board of Appeals (ZBA) consists of five members, all of whom are appointed by the Town Board of Lake Luzerne. The purpose of the ZBA is to render determinations where variances from the zoning code are requested and hear appeals from applicants seeking interpretations or reversal of determination by Lake Luzerne's Zoning Enforcement Officer.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway and Water Department maintenance responsibilities includes: brining roads before snowfall; sweeping roads in the spring; review of roads scheduled to be paved; any new projects and/or repairs; and general maintenance.
Construction/Building/Code Enforcement Department	Yes	The function of the Zoning Enforcement Officer are: A. Issues permits for land use, zoning, septic, subdivision and variance. B. Provides technical assistance to the Planning Board, the Zoning Board of Appeals and the Local Board of Health. C. Provides the point of contact to report alleged zoning or sanitary violations. D. Administers the Flood Hazard Overlay District (Floodplain). E. Ensuring continuity between Warren County building codes office and State building construction codes
Emergency Management/Public Safety Department	Yes	Warren County
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Town website, Mailchimp (mass email service)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	DPW/EMS.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Town engineer (Cedarwood) and forester (Lake George Forestry) on retainer
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Town uses Warren County Building Code and Fire Prevention Office. Also contracts with a company for engineering purposes.
Planners or engineers with an understanding of natural hazards	Yes	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	County GIS Staff, Warren County Soil & Water
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	Yes	Local Surveyors
Emergency Manager	Yes	Town Supervisor and Highway Superintendent
Grant writer(s)	Yes	County Office
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-
<b>Administrative/technical capability self-assessment</b>		
<b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b>		
By targeting parcels in the flood zones, the Town is able to ensure any construction is done according to the current regulation.		

## Fiscal Capability

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

**Table 9.10-5. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes – Water Only
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Lake Luzerne.

**Table 9.10-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	Town contracts consultant to update and maintain Municipal website
Hazard mitigation information available on your website	Yes	Capability to use MailChimp, Website can be updated as needed by Town contracted consultant
Social media for hazard mitigation education and outreach	Yes	Town contracts consultant to update and maintain municipal social media accounts
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Lake Association
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	Yes	Town website, Mailchimp (mass email service)

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Lake Luzerne.

**Table 9.10-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	Warren County is certified	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:



N/A Not applicable  
 - Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.10-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.10.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Lake Luzerne.

**Table 9.10-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Lake Luzerne	33	31	\$816,609	0	2	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss



**RL FMA Definition** Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

**RL NFIP Definition** Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Lake Luzerne.

**Table 9.10-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Flooding takes place along the Hudson River and stream properties. Impacted roadways include River Road, Davern Drive, Pleasant View, and Stevens Lane. The Town does not maintain a list of properties that were damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	No property owners have expressed interest in flood mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	The Warren County Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code and would be responsible for making determinations.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	Unknown, the current maps are the 1984 FIRM maps. The Town also use the Warren County GIS program and the floodplain layer to adequately identify parcels.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Zoning Office
Are any certified floodplain managers on staff in your jurisdiction?	Yes, Warren County has certified building inspectors.
Do you have access to resources to determine possible future flooding conditions from climate change?	Warren county is currently updating their floodplain maps, but currently we have a limited ability to develop objective information
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	The Floodplain Administrator is adequately supported and will be continuing additional training when available.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	All flood zone building applications are reviewed to ensure adherence to the towns adopted Flood Damage Local Law # 1.



NFIP Topic	Comments
	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	The Warren County building codes makes this determination based on market value from the assessor's office and the cost of the proposed construction
What are the barriers to running an effective NFIP program in the community, if any?	Staffing
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No – in good standing
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	September 4, 2019
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Local Law #1
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	No
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not participating

### 9.10.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.10–11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

The Town has not separated out permits in the floodplain area. The process to issue permits begins with Town zoning approval then on to the Warren County building codes office for approval of construction according to the NYS building code. When the Town issues a zoning compliance form, it is marked to note if it is in the SFHA and then the County assures that it is built to the regulations





of the floodplain. In the future, the Town will mark on the accounting list if it is in the floodplain or not.

**Table 9.10-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	14	N/A	12	N/A	8	N/A	12	N/A	12	N/A	16	N/A
Multi-Family	0	N/A	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	2	N/A	19	N/A	19	N/A	19	N/A	25	N/A	21	N/A
Total New Construction Permits Issued	16	N/A	31	N/A	27	N/A	31	N/A	37	N/A	37	N/A

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2017 to Present					
None identified					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Lake Luzerne Woods	Residential	17 lots	Sagamore Drive	None	Approved
Evergreen Estates	Residential	11 lots	Call Street	None	Approved in 2011
TBD, proposed subdivision	Residential	8-10 lots	Hidden Valley Road	None	Proposed
TBD, proposed subdivision	Residential	TBD	Route 9N	None	Proposed

SFHA Special Flood Hazard Area (1% flood event)

Note: Information on building permits issued within the SFHA was not available for this plan update.

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

### 9.10.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Lake Luzerne's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Lake Luzerne has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.



Figure 9.10-1. Town of Lake Luzerne Flood Hazard Area Extent and Location Map

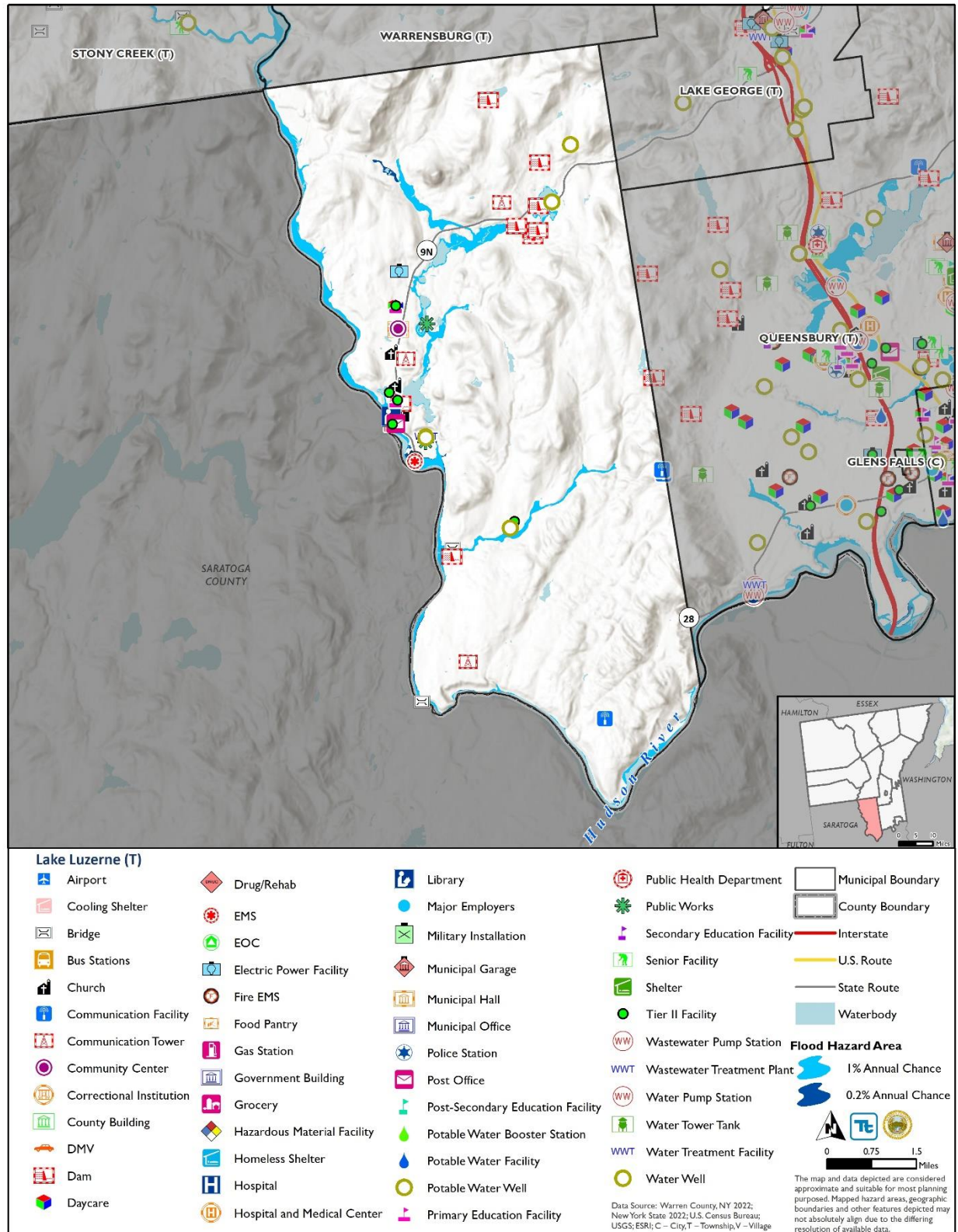






Figure 9.10-2. Town of Lake Luzerne Earthquake (Soil Class) Hazard Area Extent and Location Map

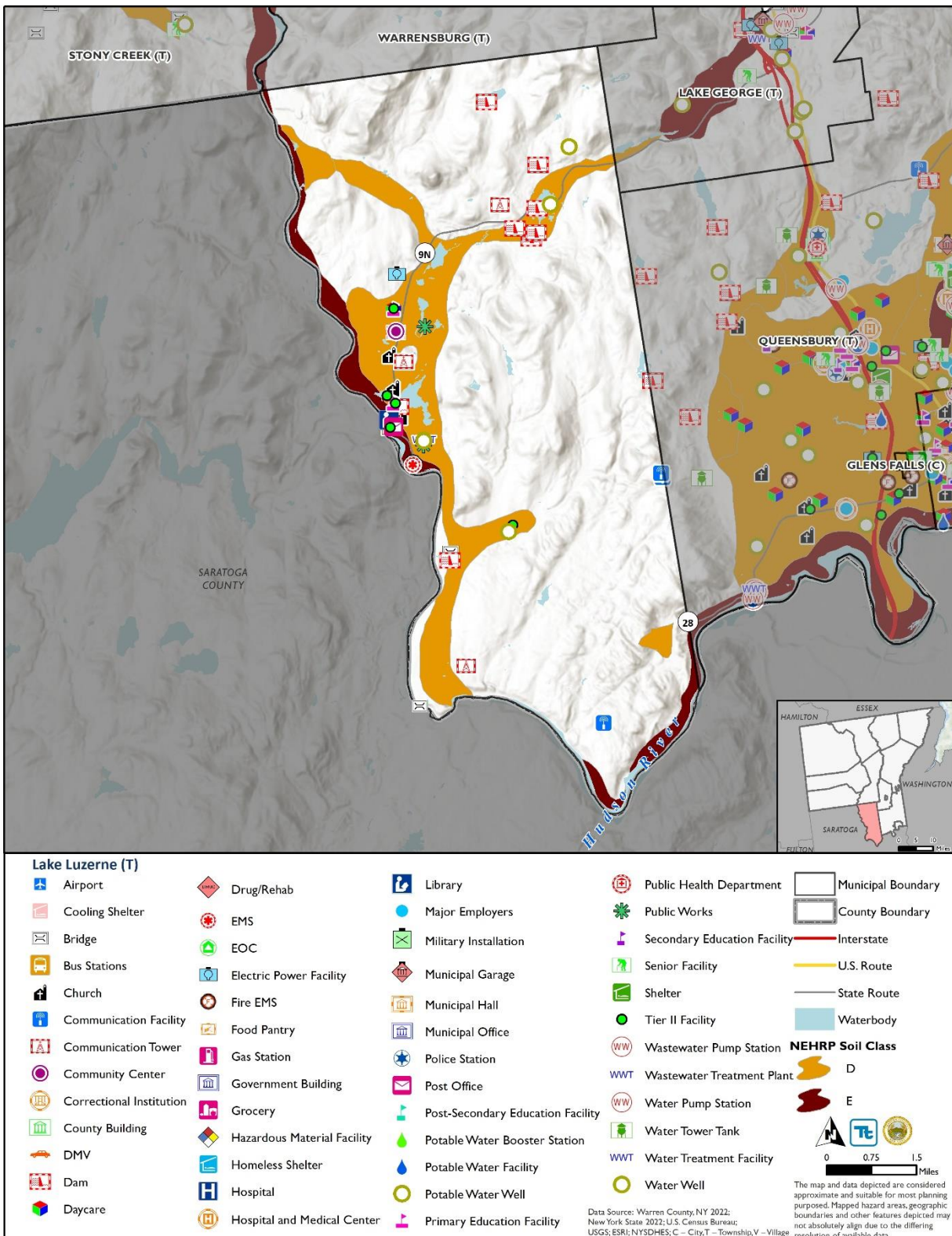
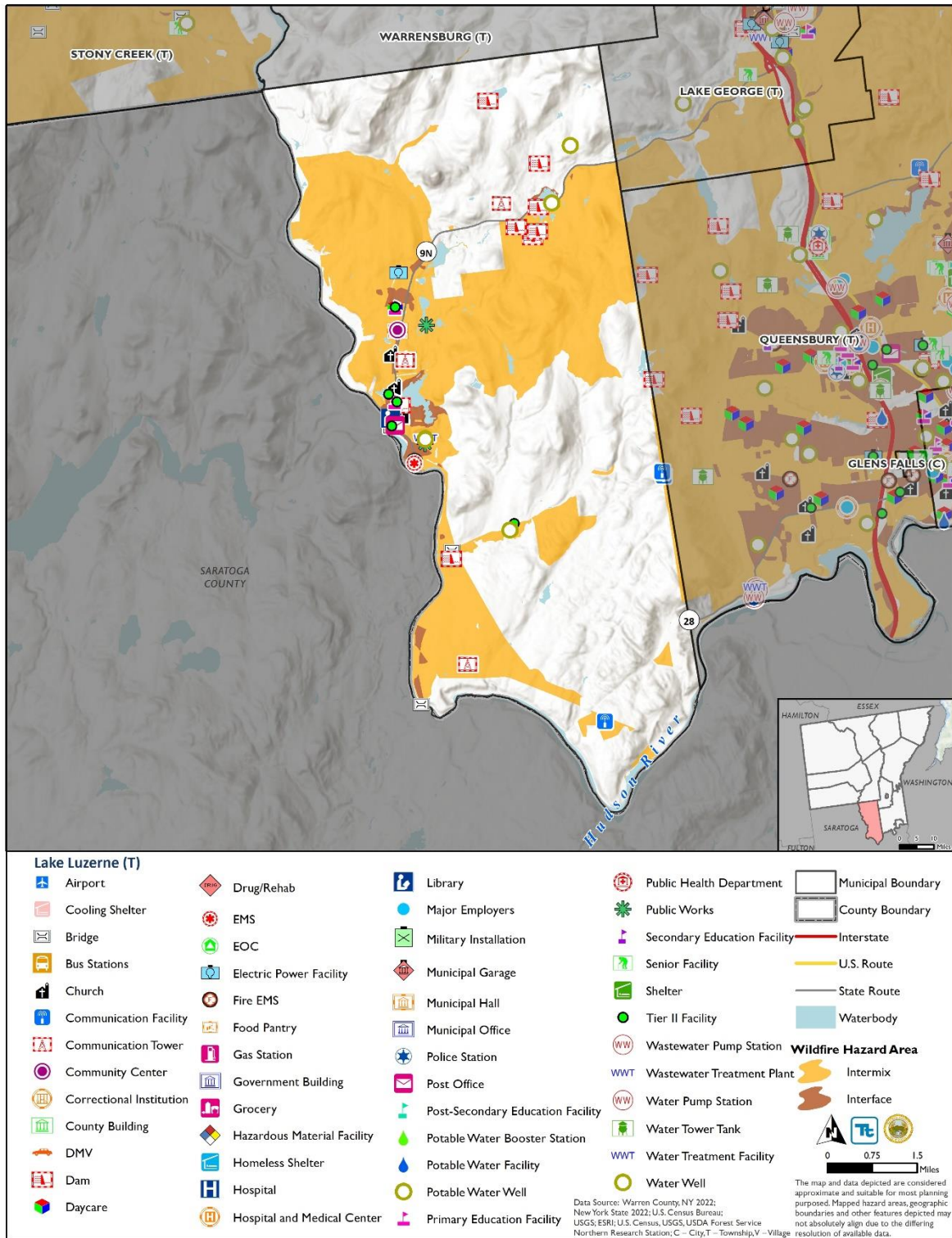




Figure 9.10-3. Town of Lake Luzerne Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Lake Luzerne's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.10-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.10-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
July 2017 Beartown	Road washout	No	Beartown experienced road washout.	Three culverts washed out.
October 31 – November 1, 2019	Severe Storms, Straight Line Winds, Flooding (DR-4472)	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York. A state of emergency was declared for Warren County, and boil water notices was issued in Warren County due to floodwater inundation of private and public water systems.	Three culverts washed out.
May 29, 2020	Windstorm	No	Wind (tornado) event.	Tree damage, damage to private property and major power outages
January 20, 2020	COVID-19 Pandemic (DR-4480 and EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19.	The Town was subject to closures and masking/social distancing requirements.
April 2021	Road washout	No	Beartown experienced road washout.	Three culverts washed out.

Notes:

EM      Emergency Declaration (FEMA)

FEMA    Federal Emergency Management Agency





DR Major Disaster Declaration (FEMA)  
N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Lake Luzerne's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Lake Luzerne. The Town of Lake Luzerne reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town agreed with the calculated hazard rankings.

**Table 9.10-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Medium	Low	High	High	Medium	Medium

Dam Failure	Disease Outbreak
Medium	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at



<http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.10-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Ferguson Dam	Dam	X	X	–	No deficiencies noted.
Lake Forest Dam	Dam	X	X	2023-Town of Lake Luzerne-O11	–
Lake Luzerne Dam	Dam	X	X	–	Maintenance recently completed.
Densmore	Bridge	X	X	–	Recently constructed to modern standards
East River Drive	Bridge	X	X	–	County bridge. No deficiencies noted.
Luzerne-Hadley EMS	EMS Station	–	X	–	–

Source: Warren County 2022

## Identified Issues

After review of the Town of Lake Luzerne’s hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Lake Luzerne identified the following vulnerabilities within their community:

- Problem: There is a need for two replacement stream crossings on Beartown Road for Schaeffers Brook (Upper and Lower Crossings). Both crossings are located in the Upper Hudson River watershed. The road at these locations has been washed out several times in the past decade. Sediment has been deposited into this trout stream leading to the Hudson River during each washout event (estimated between 5 to 10 cubic yards per event). The current crossings consist of heavily damaged 5.8' x 4' x 30' arched culverts with a secondary overflow round culvert measuring 30" in diameter. The Town’s flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.





- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has 2 repetitive loss properties, but other properties may be impacted by flooding as well. Areas of previous flood damages exist on River Road, Davern Drive, Pleasant View Drive, and Stephen Lane.
- The Reed Park Road bridge is degraded and requires replacement. The cobble stone backwall and portions of wingwalls have missing mortar and displaced stones throughout. The majority of the shotcrete is cracked and spalling. Substructures protrude into the waterway and the existing foundation type is unknown. There is deterioration of the concrete and undermining mostly at the upstream end as the water from the large waterbody creates a high velocity flow as the water level downstream try to equalize.
- The Town currently does not participate in the CRS program but is unsure if participation would be cost-effective.
- Continual beaver dam breaches result in flooding and damage potential in areas including Towner Road, Reed Park Road, Ralph Road, and Potash Road.
- The Town lacks procedures for disaster debris management.
- While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals.
- The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.
- Emergency planning is in need of update. If current leadership is not available to utilize their past knowledge and experience mitigating hazards, emergency response capabilities may be reduced.
- Lake Forest Dam is a privately owned dam. The dam owner has noted that funding would be needed to address necessary maintenance of the dam.

### 9.10.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



Table 9.10-15. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
TLL-1	Integrate the risk assessment and recommendations of the HMP into the Town Master plan.	All Hazards		Town Board	Ongoing Capability	Damages Avoided; Evidence of Success		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLL-2	Increase personnel capabilities, knowledge and preparedness level by increasing number of natural hazard exercises.	All Hazards		Highway Superintendent/Town Board	Ongoing Capability -Zoning officer and Highway Superintendent attended Reducing Development Impacts to Streams: Cause and Effect (7/2019) hosted by Warren County Soil and Water. -Zoning officer attended Flood Plain Management Training (11/2019)	Damages Avoided; Evidence of Success		1. Discontinue 2. 3. Ongoing capability
TLL-3					No Progress	Cost		1. Include in 2023 HMP



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Level of Protection	Damages Avoided; Evidence of Success	
	Consider Participation in the CRS program.	Flood		Town Board		Cost		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLL-4	Prepare a Natural Resource Inventory for Lake Luzerne to provide the community with information needed to make decisions about the protection of critical resources and changes to municipal laws.	All Hazards		Town Board	Ongoing Capability. Lake Vanare emergency action plan established. 2022 repairs to Lake Luzerne dam.	Level of Protection		2. 3.
TLL-5	Mitigate Bear Town Road by upgrading the existing culvert and elevating the roadway.	Flood	Culvert undersized	Highway Superintendent	In Progress	Cost		1. Discontinue 2. Ongoing capability
TLL-6 (carryover)	Compile and maintain lists of elderly, functional	All Hazards		Town Board, Recreation Assistant	Ongoing Capability	Damages Avoided; Evidence of Success		1. Discontinue 2. Applied for 4 grants that have been denied. Two impacted road crossings



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	needs, and low-income individuals of concern during major events. - Obtain a list of elderly meals on wheels recipients. - Obtain a list of senior star recipients from the assessor					Damages Avoided; Evidence of Success		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TLL-7 (carryover)	Update "Flood Damage Prevention Local Law # 1 of 1987, and consider including a provision to ask for assessment relief (unimproved private properties get a lower assessment) if property owners agree to not develop in flood prone areas	Flood		Town Board, Code Officer, FPA	No Progress	Cost		3. Ongoing capability. Lists are ongoing and constantly updated
						Level of Protection		
						Damages Avoided; Evidence of Success		
TLL-8 (carryover)	Provide residents with information listing steps taken to	Flood		Town Board, County Office of Emergency	Ongoing Capability	Cost		1. Discontinue 2.
						Level of Protection		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Damages Avoided; Evidence of Success		
	lessen potential flood damage to reduce the impact and on the benefits of carrying flood insurance through NFIP.			Services, Town Floodplain Administrator, Warren County Soil & Water Department				<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
TLL-9	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with critical facilities and repetitive loss properties as a priority when applicable. Town support shall include direct outreach to flood-prone property owners, specifically critical	All Hazards		Town Board	In Progress	Cost Level of Protection Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> <li>2.</li> <li>3.</li> </ol>



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
	<p>facility owners/operators and those identified by FEMA as RL/SRL or otherwise identified as flood-prone, and working with interested and voluntary property owners to mitigate their properties based on available funding from FEMA and local (property owner) match availability.</p> <p>Efforts to mitigate critical facilities shall recognize Federal and State directives for protection to the 500-year flood level or "worst case scenario".</p>							<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
TLL-10	Replace and elevate Reed Park Road Bridge	Flood		Highway Superintendent	In Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2. Applied for two grants which were denied



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )		Next Steps
						Damages Avoided; Evidence of Success		
						Cost		1. Project to be included in 2023 HMP or Discontinue
						Level of Protection		2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
						Damages Avoided; Evidence of Success		3. If discontinue, explain why.
TLL-11	Evaluate ways to mitigate flooding to the 500-year event level at Lake Avenue Firehouse. Implement best mitigation alternative(s) as funding is secured.	All Hazards		Town Fire Department, Highway Superintendent	Complete	Cost		3.
						Level of Protection		1. Discontinue
						Damages Avoided; Evidence of Success		2.
								3. Complete
TLL-12	Stabilize Slope on Hall Hill Road	Flood, Severe Storm		Town Highway Superintendent, WCSW	Complete	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
TLL-13	Develop and implement a plan to collaborate with State and private property owners to reduce risks from beaver dams in areas including	Flood		Highway Department, NYS DEC, Private property owners	In Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2. Additional beaver dams include Ralph Road and Potash Road
						Damages Avoided; Evidence of Success		3.





Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is <u>complete</u> )			Next Steps
	Towner Road and Reed Park Road.								<ol style="list-style-type: none"><li>1. Project to be included in 2023 HMP or Discontinue</li><li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li><li>3. If discontinue, explain why.</li></ol>



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.10-15, the Town of Lake Luzerne identified the following mitigation efforts completed since the last HMP:

- None identified

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Lake Luzerne participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.10-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X				X	X				X
Extreme Temperature	X				X	X				X
Flood	X	X	X		X	X		X	X	X
Severe Storm	X	X			X	X			X	X
Severe Winter Storm	X				X	X				X
Wildfire	X				X	X				X
Infestation	X		X		X	X		X		X
Dam Failure	X			X	X	X	X			X
Disease Outbreak	X				X	X				X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.10-17).

The table below summarizes the specific mitigation initiatives the Town of Lake Luzerne would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



**Table 9.10-17. Proposed Hazard Mitigation Initiatives**

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Lake Luzerne-001	Bear Town Road	1, 5	Flood, Severe Storm	<b>Problem:</b> There is a need for two replacement stream crossings on Beartown Road for Schaeffers Brook (Upper and Lower Crossings). Both crossings are located in the Upper Hudson River watershed. The road at these locations has been washed out several times in the past decade. Sediment has been deposited into this trout stream leading to the Hudson River	No	Permitting will be required from NYSDEC and USACE, generally these projects fall under the NYSDEC General Permit (GP-5-09-002) and the USACE Nationwide permit #3 (Maintenance). These permits will be obtained once the draft design has been approved by the municipality.	Within 5 years	Highway Superintendent, Warren County Soil and Water Conservation District	\$100,000 per crossing	Reduction in flooding and flood damage, improved water quality and protection of critical fish habitat.	WQIP, HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				during each washout event (estimated between 5 to 10 cubic yards per event). The current crossings consist of heavily damaged 5.8' x 4' x 30' arched culverts with a secondary overflow round culvert measuring 30" in diameter. <b>Solution:</b> The Town will mitigate Bear Town Road by upgrading the existing culverts and elevating the roadway. The replacement structure proposed at										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				each location is an aluminum box culvert with full invert and headwalls measuring 18.2' X 4.7' X 35' in order to meet both NYSDEC and USACE sizing requirements for this location.										
2023-Town of Lake Luzerne -002	Flood Damage Prevention Ordinance Update	1	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement. <b>Solution:</b> The Town will update and	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				adopt the ordinance to include a 2 feet freeboard requirement for all construction. The Town will consider including a provision to ask for assessment relief (unimproved private properties get a lower assessment) if property owners agree to not develop in flood prone areas.										
2023-Town of Lake Luzerne -003	Repetitive Loss Mitigation	1	Flood, Severe Storm	<b>Problem:</b> Frequent flooding events have resulted in damages to residential properties.	No	None	Within 5 years	Highway Superintendent	Staff time, High for elevations	Reduction in flooding and flood damage	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>These properties have been repetitively flooded as documented by paid NFIP claims. The Town has 2 repetitive loss properties, but other properties may be impacted by flooding as well. Areas of previous flood damages exist on River Road, Davern Drive, Pleasant View Drive, and Stephen Lane.</p> <p><b>Solution:</b> The Town FPA will work with homeowners to discuss options for</p>										





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				funding to elevate structures.										
2023-Town of Lake Luzerne -004	Reed Park Road Bridge	1	Flood	<b>Problem:</b> The Reed Park Road bridge is degraded and requires replacement. The cobble stone backwall and portions of wingwalls have missing mortar and displaced stones throughout. The majority of the shotcrete is cracked and spalling. Substructures protrude into the waterway and the existing foundation type is unknown. There is deterioration	Yes	May require permitting	Within 5 years	Highway Superintendent	\$1.2 million	Bridge safety restored, strengthened to withstand future flood events	BridgeNY, HMGP, BRIC, PDM, Town budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>of the concrete and undermining mostly at the upstream end as the water from the large waterbody creates a high velocity flow as the water level downstream try to equalize.</p> <p><b>Solution:</b> The Town will complete a reconstruction of the bridge. The new bridge will be designed to withstand a 500-year flood event. The final structure type will be selected during design, however for estimating</p>										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				purposes a three sided structure with precast wingwalls is assumed. The bridge will have a proposed span length of 28.5ft which is 1.5 times the existing waterway opening. However a full hydraulic analysis would be completed during design.										
2023-Town of Lake Luzerne -005	Consider Participation in the CRS Program	1, 4	Flood	<b>Problem:</b> The Town currently does not participate in the CRS program but is unsure if participation would be cost-effective.	No	None	3 years	FPA, Administration	Staff time	CRS participation evaluated	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will request a What If Statement to determine potential savings that could be provided by the CRS program and evaluate necessary floodplain management upgrades. If cost-effective, the Town will join the program.										
2023-Town of Lake Luzerne -006	Beaver Mitigation	1, 5	Flood, Infestation and Invasive Species	<b>Problem:</b> Continual beaver dam breaches result in flooding and damage potential in areas including Towner Road, Reed Park Road, Ralph	No	Yes, some solutions may not be available due to beaver restrictions	Within 5 years	Highway Department, NYS DEC, Private property owners, Warren County Soil and Water Conservation District (SWCD)	TBD by identified strategies	Reduction in beaver dam failure flood events	Town budget	High	NSP	NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Road, and Potash Road. <b>Solution:</b> Develop and implement a plan to collaborate with State and private property owners to reduce risks from beaver dams in areas including Towner Road and Reed Park Road.										
2023-Town of Lake Luzerne -007	Disaster Debris Management	3	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Town lacks procedures for disaster debris management. <b>Solution:</b> The Town will explore possible shared services with Hadley for disaster debris response.	No	None	2 years	Highway Department, Administration, Town of Hague	Staff time	Improved post-disaster capabilities	Town budget	High	LP R	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Lake Luzerne -008	Substantial Damage Procedures	1, 3	All Hazards	<b>Problem:</b> While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The Town will develop and implement substantial damage and substantial improvement determination procedures.	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal Budget	High	LP R	PP, PR
2023-Town of Lake	Support Updated NFIP Mapping	1, 4	Flood	<b>Problem:</b> The City of Glens Falls and the Towns of	No	None	Within 5 years	FPA	Staff time	Improved floodplain mapping	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Luzerne-009				<p>Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.</p> <p><b>Solution:</b> To the extent applicable and feasible, the Town shall use all available means of</p>										





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				promoting broad local government and public involvement through announcing meetings and providing available supporting data as applicable.										
2023-Town of Lake Luzerne-010	Emergency Planning	3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> Emergency planning is in need of update. If current leadership is not available to utilize their past knowledge and experience mitigating hazards, emergency response capabilities may be reduced.	No	None	Within 5 years	Administration	Staff time	Improved emergency planning and capabilities	Town budget	High	LP R	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will develop plans of actions for use in times of emergency.										
2023-Town of Lake Luzerne -O11	Lake Forest Dam Outreach	1, 2	Dam Failure	<b>Problem:</b> Lake Forest Dam is a privately owned dam. The dam owner has noted that funding would be needed to address necessary maintenance of the dam. <b>Solution:</b> The Town will share information about grant opportunities from FEMA and NYS to the dam owner.	Yes <span style="color: blue;">●</span>	None identified	2 years	Administration, facility manager	Staff time	Facility manager aware of funding opportunities for potential mitigation of the dam	Town budget for outreach	High	EAP	PI

## Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

Potential FEMA HMA Funding Sources:

Timeline:



CAV Community Assistance Visit  
CRS Community Rating System  
DPW Department of Public Works  
EHP Environmental Planning and Historic Preservation  
FEMA Federal Emergency Management Agency  
FPA Floodplain Administrator  
HMA Hazard Mitigation Assistance  
N/A Not applicable  
NFIP National Flood Insurance Program  
OEM Office of Emergency Management

FMA Flood Mitigation Assistance Grant Program  
HMGP Hazard Mitigation Grant Program  
BRIC Building Resilient Infrastructure and  
Communities Program

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes  Critical Facility located in 1% floodplain

*Mitigation Category:*

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

*CRS Category:*

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.10-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Lake Luzerne-001	Bear Town Road	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2023-Town of Lake Luzerne-002	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Lake Luzerne-003	Repetitive Loss Mitigation	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Lake Luzerne-004	Reed Park Road Bridge	0	1	1	1	1	0	0	1	1	1	0	0	1	1	9	High
2023-Town of Lake Luzerne-005	Consider Participation in the CRS Program	1	1	1	1	0	1	1	1	1	1	0	0	1	1	11	High
2023-Town of Lake Luzerne-006	Beaver Mitigation	0	1	1	1	1	0	1	1	1	1	1	0	1	1	11	High
2023-Town of Lake Luzerne-007	Disaster Debris Management	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Lake Luzerne-008	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Luzerne-009	Support Updated NFIP Mapping	0	1	1	1	1	1	1	1	1	1	0	0	1	1	11	High
2023-Town of Lake Luzerne-011	Lake Forest Dam Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.10.8 Action Worksheets

The following action worksheets were developed by the Town of Lake Luzerne to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Bear Town Road		
<b>Project Number:</b>	2023-Town of Lake Luzerne-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	There is a need for two replacement stream crossings on Beartown Road for Schaeffers Brook (Upper and Lower Crossings). Both crossings are located in the Upper Hudson River watershed. The road at these locations has been washed out several times in the past decade. Sediment has been deposited into this trout stream leading to the Hudson River during each washout event (estimated between 5 to 10 cubic yards per event). The current crossings consists of heavily damaged 5.8' x 4' x 30' arched culverts with a secondary overflow round culvert measuring 30" in diameter.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will mitigate Bear Town Road by upgrading the existing culverts and elevating the roadway. The replacement structure proposed at each location is an aluminum box culvert with full invert and headwalls measuring 18.2' X 4.7' X 35' in order to meet both NYSDEC and USACE sizing requirements for this location.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	TBD by final design	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, flood damages
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$100,000 per crossing	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, PDM, HMGP, CHIPS, Town budget
<b>Responsible Organization:</b>	Highway Superintendent, Warren County Soil and Water Conservation District	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove road	N/A	Roadway cannot be removed
	Relocate road to another location	N/A	Not feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Bear Town Road	
<b>Project Number:</b>	2023-Town of Lake Luzerne-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadways from flooding, culvert damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	Permitting will be required from NYSDEC and USACE, generally these projects fall under the NYSDEC General Permit (GP-5-09-002) and the USACE Nationwide permit #3 (Maintenance). These permits will be obtained once the draft design has been approved by the municipality.
Fiscal	0	Project requires funding support.
Environmental	1	improved water quality and protection of critical fish habitat.
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Highway Superintendent, Warren County Soil and Water Conservation District
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	





## SECTION 9.

### 9.11 TOWN OF QUEENSBURY

This section presents the jurisdictional annex for the Town of Queensbury that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Queensbury's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.11.1 Hazard Mitigation Planning Team

The Town of Queensbury identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Planning Department, Building of Code Enforcement, Highway Department, and the Fire Marshal. The Land Use Planner represented the community on the Warren County Hazard Mitigation Plan Planning Partnership, Steering Committee, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.11-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title John Strough – Supervisor Address: 742 Bay Road, Queensbury, NY 12804 Phone Number: (518) 761-8229 Email: <a href="mailto:gbysupervisor@queensbury.net">gbysupervisor@queensbury.net</a>	Name/Title: Craig Brown, Planning/Community Development Director Address: 742 Bay Road, Queensbury, NY 12804 Phone Number: (518) 761-8220 Email: <a href="mailto:craigb@queensbury.net">craigb@queensbury.net</a>
<b>NFIP Floodplain Administrator</b>	
Name/Title: John O'Brien – Director of Building and Code Enforcement Address: 742 Bay Road, Queensbury, NY 12804 Phone Number: 518-761-8256 Email: <a href="mailto:johno@queensbury.net">johno@queensbury.net</a>	
<b>Additional Contributors</b>	
Name/Title: Dave Duell – Highway Superintendent	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided data and information	
Name/Title: Mike Palmer – Fire Marshal	
Method of Participation: Provided data and information	
Name/Title: Laura Moore – Land Use Planner	
Method of Participation: Provided information on previous events, capabilities, building permits, reviewed hazard rankings, contributed to mitigation strategy, reviewed annex	
Name/Title: John O'Brien – Director of Building and Code Enforcement	
Method of Participation: Provided information on NFIP administration, building permits	
Name/Title: Kate Deck – Building and Codes Department	
Method of Participation: Provided information on building permits	
Name/Title: John Strough – Supervisor	
Method of Participation: Provided information on dams impacting the Town, contributed to mitigation strategy.	

### 9.11.2 Municipal Profile

The Town of Queensbury is in the southeastern corner of Warren County. It has a total land area of 64.81 square miles of which 63.01 square miles is land and 1.80 square miles is water. The Town is bordered to the west by the Town of Lake Luzerne, to its east by Washington County, to its north by Lake George, and to its south by the City of Glens Falls and the Hudson River. Queensbury is a town of the first class and is governed by a town board consisting of four councilmembers and a town supervisor. The town includes 16 hamlets and one census-designated place including: Brayton, East Lake George, French Mountain, Glen Lake, Glens Falls North, Harrisena, Kattskill Bay, Lake Sunnyside, Oneida Corners, Paradise Beach, Queensbury, West Glens Falls, Jenkinsville, South Queensbury, Top O'the World and West Mountain. In addition to portions of Lake George, the Town includes Glen Lake and Lake Sunnyside.

According to the U.S. Census, the 2020 population for the Town of Queensbury was 29,169, a 4.54 percent increase from the 2010 Census. Data from the 2020 U.S. Census indicate that 3.90 percent of the population is 5 years of age or younger and 24.1 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Queensbury has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 8.86% of the population does not have a high school diploma
- 14.34% of the population has a disability
- 6.62% of households do not have a vehicle
- 4.91% of the population is living below the poverty level
- 0.00% of the population is unemployed

### 9.11.3 Jurisdictional Capability Assessment and Integration

The Town of Queensbury performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section



6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Queensbury to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Queensbury. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.11-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Code; Chapter 58 Building Requirements	Local	Building Code Enforcement Officer, Fire Marshal
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Queensbury adopted the New York State Uniform Fire Prevention and Building Code to guide safe new development.  Chapter 58 requires an elevator for all housing complexes for the elderly or handicapped which contain 10 or more units above the first floor.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 179 – Zoning	Local	Zoning Administrator /Code Compliance Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The Ordinance promotes the health, safety and general welfare of the residents and property owners of the Town. The Ordinance ensures the overall conservation, protection, development and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the Town.				
<b>Subdivision Ordinance</b>	Yes	Chapter 178 – Zoning – Subdivision Review Chapter 183	Local	Zoning Administrator /Code Compliance Officer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The type of two-lot subdivision allowed without Planning Board approval would not seem to generally cause any environmental concerns and also would not seem to warrant the expenditure of time and money by all concerned for a review by the Planning Board. Also, as subdivisions in the Adirondack Park may be subject to restrictions or notification procedures under state law, any subdivision in the Adirondack Park would still be subject to Planning Board review to make it easier, procedurally, to be sure that law is complied with in the event that compliance is necessary.</p>				
<b>Site Plan Ordinance</b>	Yes	Chapter 179 – Zoning	Local	Zoning Administrator/ Code Compliance Officer/ Planning Board, Zoning Board of Appeals
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of site plan review is to ensure that a site can properly accommodate proposed new uses and/or structures or expansion of existing uses and structures with minimal effect on neighboring properties and the general area within the vicinity of the site and to ensure that such development is appropriately integrated into the community in accordance with the goals and objectives of this chapter and the Comprehensive Plan.</p>				
<b>Stormwater Management Ordinance</b>	Yes	Chapter 147 – Stormwater Management	Local	Zoning Administrator/ Code Compliance Officer/ Stormwater Officer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the Town of Queensbury by preserving and protecting the quality of the ground- and surface waters.</p> <p>The Ordinance outline the following objective of purpose:</p> <ol style="list-style-type: none"> <li>Meet the requirements of minimum measures 4 and 5 of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, as amended or revised</li> <li>Require land development activities to conform to the substantive requirements of the SPDES General Permit for Construction Activities, GP-02-01, as amended or revised</li> <li>Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels</li> </ol>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality</p> <p>E. Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable</p> <p>F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety.</p> <p>G. Provide for more stringent requirements within the portion of the Town that is within the Lake George Park, reflecting the unique environmental sensitivity of Lake George and the need to protect its water quality.</p>				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	Yes	Chapter 179 Zoning-13-050 Destruction	Local	Building and Code Enforcement Zoning Administrator/ Code Compliance Officer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <ul style="list-style-type: none"> <li>Any structure which is nonconforming due to a setback violation or, in the case of multifamily housing, due to greater density than would be allowed by this chapter, which is destroyed wholly or in part by fire, flood, wind, hurricane, tornado or other act beyond the control of man shall be allowed to reconstruct according to its original dimension and density if a complete building permit for said reconstruction is submitted within 18 months of said destruction. If a complete building permit for reconstruction has not been submitted within this period, the rebuilt structure must conform to this chapter.</li> <li>Any structure which is a nonconforming use according to the provisions of this chapter that is destroyed by fire, flood, wind, hurricane, tornado or other act beyond the control of man, to the extent of 50% of the assessed value of the structure or more, may be replaced if a complete building permit for said reconstruction is submitted within 18 months of the destructive incident. If a complete building permit for reconstruction has not been submitted within this period, the rebuilt structure must conform to this chapter.</li> </ul>				
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.</p>				
<b>Growth Management</b>	No	-	-	-
<b>Environmental Protection Ordinance</b>	Yes	Chapter 179 Article 6; Chapter 94 Freshwater Wetlands	Local	Zoning Administrator/ Code Compliance Officer
<p>Chapter 179: It is declared to be the public policy of the Town of Queensbury to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom, to prevent any despoliation and destruction of freshwater wetlands and to regulate the development of such wetlands in order to secure the natural benefits of freshwater</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
wetlands, consistent with the general welfare and beneficial economic, social and agricultural development of the Town. It is further declared to be the policy of the Town of Queensbury to exercise its authority pursuant to Article 24 of the State Environmental Conservation Law, as such Article may from time to time be amended.				
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 91 – Flood Damage Prevention, 1996	Local	Building and Code Enforcement/Floodplain Manager (Director Building and Codes)
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li><li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands</li><li>F. Qualify and maintain for participation in the National Flood Insurance Program.</li></ul> The objective of this Ordinance are to: <ul style="list-style-type: none"><li>A. Protect human life and health</li><li>B. Minimize expenditure of public money for costly flood control projects</li><li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public</li><li>D. Minimize prolonged business interruptions</li><li>E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard</li><li>F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas</li><li>G. Provide that developers are notified that property is in an area of special flood hazard.</li><li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li></ul> The ordinance currently requires 1 foot of freeboard for all construction. The ordinance requires update to meet NYS's 2 feet of freeboard requirement.				
<b>Wellhead Protection</b>	No	-	-	-
<b>Emergency Management Ordinance</b>	No	-	-	-
<b>Climate Change Ordinance</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Other	Yes	Chapter 173 Water	Local	Superintendent of Water Department
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i>  The purpose and the intent of this article is to conserve and protect the water supply of the water districts in the Town of Queensbury by limiting, restricting and/or prohibiting its use for certain purposes, in the interest of public health, safety and welfare.</p>				
<b>Planning Documents</b>				
Comprehensive Plan	Yes	Comprehensive Land Use Plan – 2007 (Being updated in 2022–2023)	Local	Planning and Community Development
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i>  The Comprehensive Plan outlines short-term and long-term goals that will monitor the growth and development of the Town while enhancing economic health, walkability, environmental protection and quality of life for the Town residents and visitors.</p>				
Capital Improvement Plan	No	–	–	–
Disaster Debris Management Plan	No	–	–	–
Floodplain Management or Watershed Plan	No	–	–	–
Stormwater Management Plan	No	–	–	–
Open Space Plan	Yes	An Open Space Vision for the Town of Queensbury	Local	Planning and Development
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i>  The Plan introduces long-term goals for conservation of natural resources, and cultural heritage.</p>				
Urban Water Management Plan	No	–	–	–
Habitat Conservation Plan	No	–	–	–
Economic Development Plan	No	–	–	–
Community Wildfire Protection Plan	No	–	–	–
Community Forest Management Plan	No	–	–	–
Transportation Plan	No	–	–	–
Agriculture Plan	No	–	–	–



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town has a local committee, but no plan is in place.				
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	Yes	Chapter 88 19 NYCRR Part 1203 Code and Energy	NYS & Local	Fire Marshal, Building and Codes Enforcement Officers
Promotes the health, safety and general welfare of the residents and property owners of the Town. The Ordinance ensures the overall conservation, protection, development and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the Town				
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Comprehensive Emergency Management Plan	Local	Town Supervisor, Emergency Management Coordinator
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan establishes the potential hazards that could impact the Town and as assessment of the capabilities existing in the Town to deal with potential problems. The Plan identifies management responsibilities of the Town departments and related agencies, both emergency and non-emergency. The Plan emphasizes the interrelationship of activities, functions and expertise necessary to deal with emergencies.				
<b>Continuity of Operations Plan</b>	Currently under review	To be adopted Summer of 2023 default to CEMP as guidance is provided in CEMP document	Local	Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Provides protection of materials and continued use of materials as needed.				
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Yearly evaluation with County	County & Local	Fire Marshal
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Evaluates risks for various hazards.				
<b>Post-Disaster Recovery Plan</b>	Yes	Comprehensive Emergency Management Plan	Local	Town Supervisor, Emergency Management Coordinator



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan establishes the potential hazards that could impact the Town and as assessment of the capabilities existing in the Town to deal with potential problems. The Plan identifies management responsibilities of the Town departments and related agencies, both emergency and non-emergency. The Plan emphasizes the interrelationship of activities, functions and expertise necessary to deal with emergencies.				
<b>Public Health Plan</b>	Yes	COVID 19 Pandemic Response Plan March 23, 2021	Local	Town Supervisor, Emergency Management Coordinator & others
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Plan identifies how to respond to Covid-19 pandemic and can guide future disease outbreak event responses.				
<b>Other</b>	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Queensbury to oversee and track development.

**Table 9.11-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	Approvals of Projects by Planning Board and Zoning Board. Applications to Building and Codes
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Flood Plan manger/Building and Codes Director
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	The Town is able to generate data/map of acres of development versus area of potential development.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Queensbury and their current responsibilities that contribute to hazard mitigation.


**Table 9.11-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board is responsible for site plan application review, site plan approval, and subdivision application review and approval.
Zoning Board of Appeals	Yes	The Zoning Board of Appeals is responsible for reviewing and approving, approving with conditions all variance applications.
Planning Department	Yes	<p>The Planning Office is charged with long-range planning, maintenance of the Town's Comprehensive Land Use Plan, capital planning, and technical research and support.</p> <p>The staff also provides technical support to our office as well as other departments with Geographic Information System (GIS) assistance, technical research and analysis, and compliance with State (SEQRA) and Federal (NEPA) environmental review requirements.</p>
Mitigation Planning Committee	Yes	Emergency Management Planning Committee
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	501c3 entity outside
Economic Development Commission/Committee	Yes	Housing and Community Development
Public Works/Highway Department	Yes	<p>The Highway Department maintains the following Town roads:</p> <ul style="list-style-type: none"> <li>• Bay Road</li> <li>• Haviland Road</li> <li>• Blind Rock Road/Round Pond Road</li> <li>• Hicks Road</li> <li>• Boulevard #32</li> <li>• Moon Hill Road</li> <li>• Corinth Road</li> <li>• Ox Bow Hill Road</li> <li>• Country Club Road</li> <li>• Pilot Knob Road</li> <li>• Dix Avenue</li> <li>• Quaker Road</li> <li>• East Sunnyside</li> <li>• Queensbury Avenue</li> <li>• Glenwood Avenue</li> <li>• Sunnyside Road</li> <li>• West Mountain Road</li> </ul>
Construction/Building/Code Enforcement Department	Yes	<p>The Building &amp; Codes Office is responsible for review and issuance of building permits in compliance with the New York State versions of the International Codes as well as enforcement of the Towns local laws and ordinances.</p> <p>The Building and Code Office regulates the licensing of manufactured home communities, junkyards and the local</p>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		flood damage protection law and respond to complaints regarding suspected violations of the NYS Building Codes as well as construction without a building permit, unfit living conditions, uncontrolled junk, disposal of garbage and refuse, short term rentals, new and replacement septic system inspections, property transfer septic inspections and other quality of life violations.
Emergency Management/Public Safety Department	Yes	Supported through the CEMP.
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Warren County Emergency OES Ap notification ap, and other mass warning via phone.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department is responsible for tree trimming.
Mutual aid agreements	Yes	Warren County Department of Public Works
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	Outside Contract with Pinnacle
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Queensbury Planning Office
Engineers or professionals trained in building or infrastructure construction practices	Yes	Fire Marshal/ Building and Code Enforcement Officers
Planners or engineers with an understanding of natural hazards	Yes	Queensbury Planning Office & Outside contract with Town Designated Engineer
Staff with expertise or training in benefit/cost analysis	Yes	Town Supervisor, Safety Officer
Professionals trained in conducting damage assessments	Yes	Town Supervisor, Safety Officer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Town of Queensbury GIS Department, Planning Office
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Fire Marshal
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Health Officer Brian Nelson MD

## Fiscal Capability

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

**Table 9.11-5. Fiscal Capabilities**

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

### Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Queensbury.

**Table 9.11-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	Outside Contract Storedtech and Envision
Hazard mitigation information available on your website	Yes	Town Website
Social media for hazard mitigation education and outreach	Yes	National Grid (ICS) incident Command System training/Warren County
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	Yes	Fire Department and EMS hold educational assemblies within the schools, Fire Marshal as well.
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	-

### Community Classifications

The table below summarizes classifications for community programs available to the Town of Queensbury.



**Table 9.11-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	–	–
Building Code Effectiveness Grading Schedule (BCEGS)	No	–	–
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	2016
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Bronze	September 25, 2021
Storm Ready Certification	No	(Warren County is certified)	–
Firewise Communities classification	No	–	–
Other	No	–	–

Note:

N/A Not applicable

– Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.11-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate
Infestation	Strong
Dam Failure	Strong
Disease Outbreak	Moderate

### 9.11.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.



## National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Queensbury.

**Table 9.11-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Queensbury	44	13	\$49751	0	1	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Queensbury.

**Table 9.11-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	The Town does not maintain a list of properties. Areas prone to flooding Meadowbrook Road, Intersection of Haviland and Ridge Road, Bay Road between Pickle Hill Road and Route 149, Harris Bay Yacht Club Route 9L area, Big Boom, Arberger and Colby Drive Hudson River area, Canterbury Drive Glen Lake area.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No property owners are currently interested in mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	FEMA is updating the floodplain maps
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	Site visit by Building and Codes
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	Unknown
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No. FEMA maps are outdated and sometimes show flood hazards where none exist.
<b>NFIP Compliance</b>	



NFIP Topic	Comments
What local department is responsible for floodplain management?	Director of Building and Codes Enforcement/GIS Administrator
Are any certified floodplain managers on staff in your jurisdiction?	Director of Building and Codes Enforcement
Do you have access to resources to determine possible future flooding conditions from climate change?	Unknown
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	The floodplain administrator is currently adequately trained for floodplain management responsibilities, although additional training would be welcome.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	<p>The floodplain administrator is the sole person assuming responsibilities for floodplain administration including, permit review, inspections, record keeping and GIS.</p> <p>The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.</p>
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Local Code for Building and Code
What are the barriers to running an effective NFIP program in the community, if any?	Staffing shortage
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The most recent CAV was October 23, 2019.
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Town of Queensbury Chapter 91 adopted June 17, 2002.
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets minimum requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	There are no programs providing education and outreach to the community regarding flood hazards.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not Participating



### 9.11.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.11-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.11-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	63	0	56	0	60	2	31	0	34	1	22	1
Multi-Family	0	0	0	0	0	0	15	0	11	0	5	0
Other (commercial, mixed-use, etc.)	70	0	75	0	79	1	59	0	65	0	67	0
Total New Construction Permits Issued	133	0	131	0	139	3	105	0	1110	1	94	1
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
Clearbrook	Subdivision	14		Big Boom Road		Hudson River		No house under construction				
John Clendon	Subdivision	20		John Clendon Road		Rush Pond recreation area		Under construction				
Cerrone	Subdivision	45		Upper Sherman		Leaf Dump		No houses under construction				
JP Gross	Subdivision	14		Luzerne Road		APA/Slopes		No houses under construction				
JP Gross	Site Plan	Two new buildings		27 Silver Circle		NA		Under construction				
JP Gross	Site Plan	New addition16000 sq ft to 4324		407 Big Bay Road		NA		Under construction				
FHB	Site Plan	24 units 3 story structure first floor day care		78-80 Main Street		NA		Approved under construction				
Schermerhorn	Site Plan	20 units 4 separate buildings		20 Newcomb Street		NA		Approved under construction				
Tim Barber	subdivision	5 lot industrial sites buildings estimated 100,000sqft, 80,000 sq		Native Drive		Forested area		Approved				



Type of Development	2017	2018	2019	2020	2021	2022
		ft,25000 sq ft,60000 sq ft, exiting building with additions 169,550 sq ft				
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>						
Tim Barber	Site Plan	40,000 sq ft building	23 Native Drive	NA		Discussion only
Tim Barber	Site Plan	25000 sq ft building	32 Native Drive	NA		Discussion only
Schermerhorn	Site Plan	40 units two buildings	End of Walker Lane	NA		SEQR Coordination
FHB	Subdivision	19 lots	Jenkinsville Road	NA		Drinking water contamination has prevented development until water issue is resolved
Schermerhorn	Site Plan	60 Units two buildings	575 Bay Road	NA		SEQR Coordination
Legacy/Habitat for Humanity	Site Plan/Subdivision	27 unit	Baybridge Drive	NA		Repurpose of project

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.11.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Queensbury's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Queensbury has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.





Figure 9.11-1. Town of Queensbury Flood Hazard Area Extent and Location Map

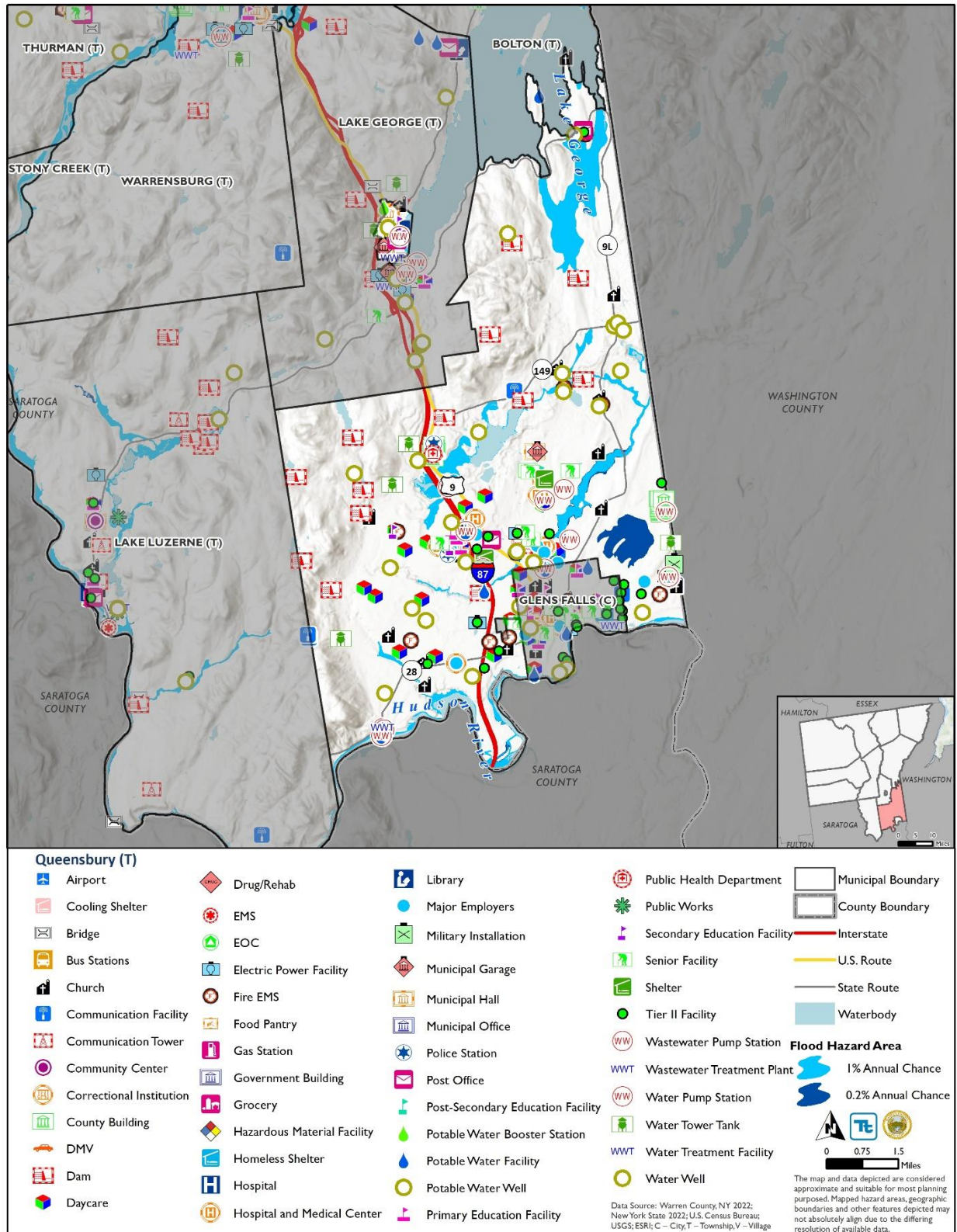




Figure 9.11-2. Town of Queensbury Earthquake (Soil Class) Hazard Area Extent and Location Map

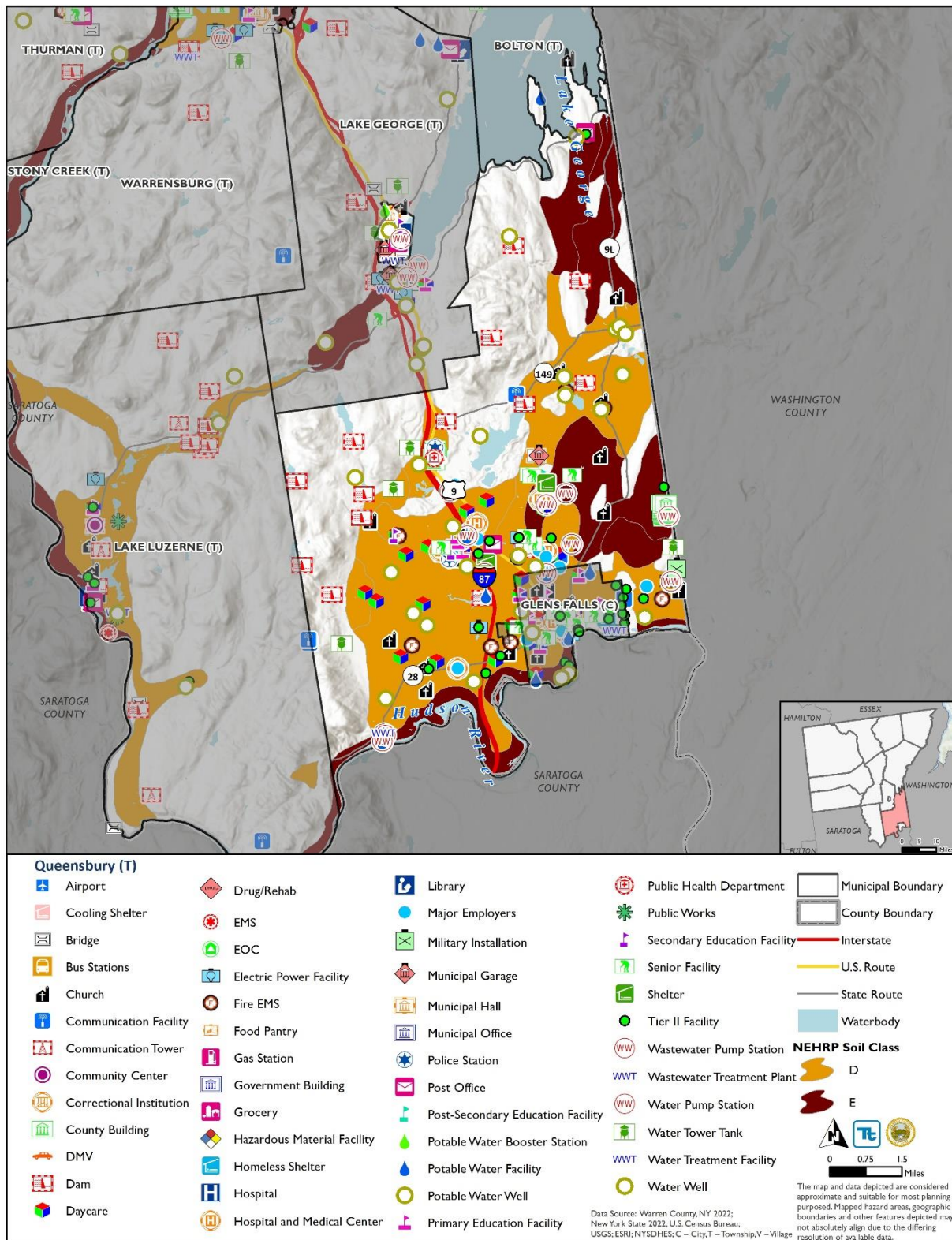
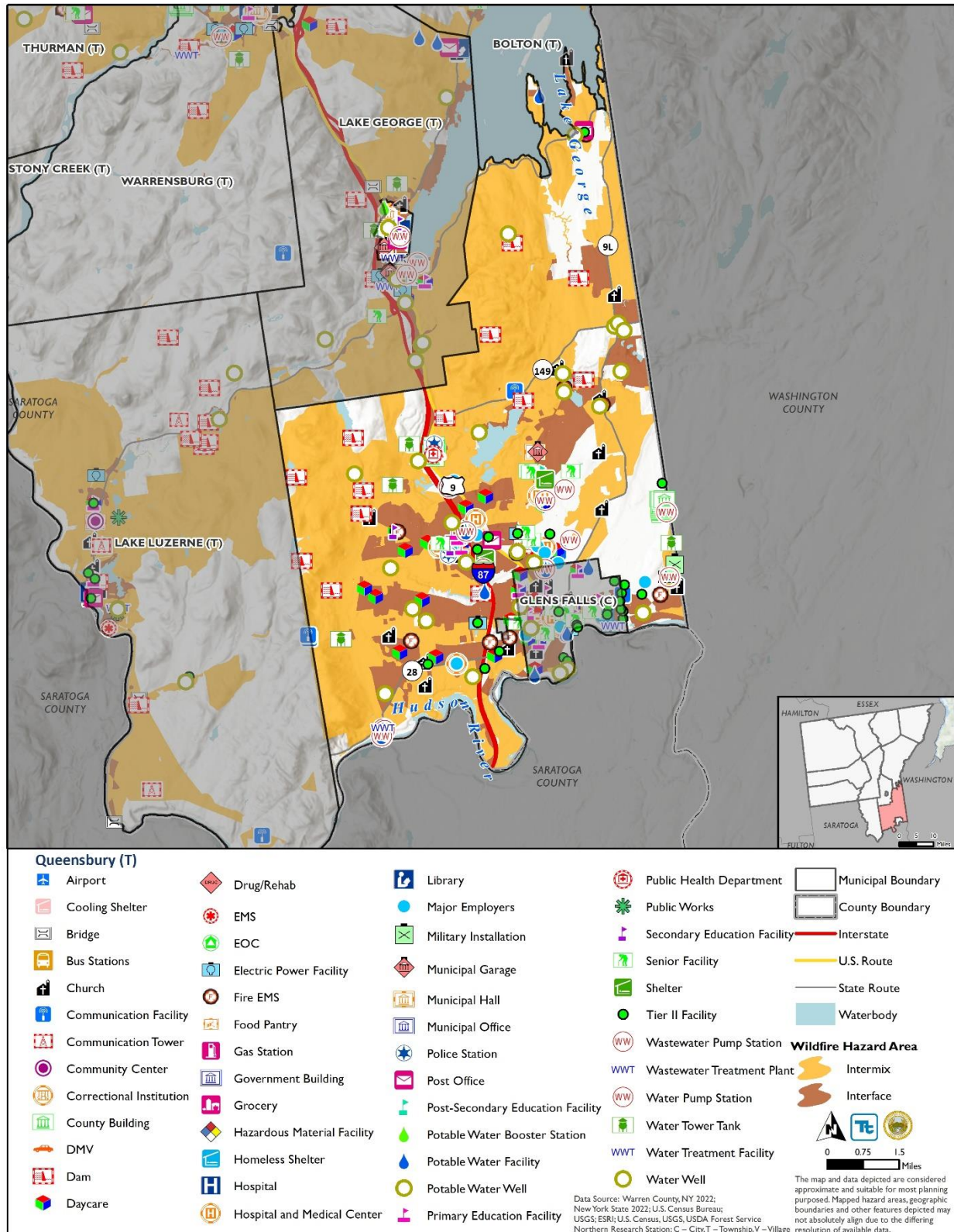






Figure 9.11 3. Town of Queensbury Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Queensbury's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.11-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.11-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	A large swath of rainfall totaling 2–5 inches, with isolated areas as high as 7 inches, occurred over the Mohawk Valley and southern Adirondacks, resulting in reports of flash flooding. The runoff caused rapid rises on area creeks and streams, with river gauges reaching record levels along the Mohawk River at Little Falls, the West Canada Creek at Hinckley and Kast Bridge, and the Sacandaga River at Hope.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19	The Town was subject to closures and social distancing/masking requirements.
October 2020	Surface water contamination	No	Harmful Algae Bloom– surface water contamination	Water contamination
Prior to 2021	Culvert washout	No	Culvert washout at Clendon Brook and West Mountain–County infrastructure.	\$839,000 to Queensbury (Warren County) for the replacement of the Luzerne Road culvert carrying Clendon Brook



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
				\$1 million to Warren County for the replacement of the Corinth Road (CR28) culvert carrying Clendon Brook
Early August 2022	Heavy rain	No	Culvert washout of Bay and Quaker. County infrastructure in the Town.	A culvert repair was necessary due to flooding.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Queensbury's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Queensbury. The Town of Queensbury reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town changed the hazard rankings for flood from low to medium, noting that flooding has limited impact on residential structures but does impact the Town.
- The Town changed the hazard ranking for disease outbreak from low to medium, noting that coronavirus and future variants continue to pose a risk to the population.
- The Town indicated a medium ranking for wildfire.



- The Town agreed with the remaining calculated hazard rankings.

**Table 9.11-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Medium	Medium	High	High	Medium	Medium

Dam Failure	Disease Outbreak
High	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.11-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Hovey Pond Dam	Dam	X	X	2023-Town of Queensbury-015	-
Dream Lake Dam	Dam	X	X	2023-Town of Queensbury-015	-
Halfway Creek Dam	Dam	X	X	2023-Town of Queensbury-015	-
Halfway Brook Pumping Station	Potable Water Facility	X	X	2023-Town of Queensbury-015	-
Queensbury Water Plant	Potable Water Facility	X	X	2023-Town of Queensbury-015	-
Glens Falls Independent Living Center	Senior Facility	X	X	2023-Town of Queensbury-014	-
Wastewater Pump Station	Wastewater Pump Station	X	X	2023-Town of Queensbury-015	-





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Low Lift Pumps	Wastewater Pump Station	X	X	2023-Town of Queensbury-015	-
Water Well	Water Well	X	X	2023-Town of Queensbury-015	-
Water Well	Water Well	X	X	2023-Town of Queensbury-015	-

Source: Warren County 2022

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in or could impact the Town of Queensbury:

- Butler Storage Reservoir Dam
- Feeder Dam at Glens Falls
- Keenan Reservoir Dam
- Wilkie Reservoir Dam

The Town receives copies of Emergency Action Plans (EAPs) for each high hazard dam, Butler Pond Reservoir Dam, and Halfway Brook Reservoir Dam. The EAPs are updated periodically. These dams receive periodic inspections from NYSDEC and the Town receives copies of the inspection reports.

The Town has also noted the importance of the following critical facilities that are not located in the floodplain:

- SUNY Adirondack
- Queensbury School Campus
- Bay Ride Fire Station
- West Glens Falls Fire Station
- Queensbury Central Fire Station
- North Queensbury Fire Station
- South Queensbury Fire Station
- West Glens Falls EMS Building

## Identified Issues

After review of the Town of Queensbury's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Queensbury identified the following vulnerabilities within their community:

- Critical facilities require backup power to maintain essential functions during and after disaster events. Mountain Lakes EMS lacks a generator and the generator for Town Hall requires replacement.
- The Town currently does not participate in the Community Rating System.
- The Comprehensive Land Use Plan outlines short-term and long-term goals that will monitor the growth and development of the Town while enhancing economic health, walkability,



environmental protection and quality of life for the Town residents and visitors. The Plan is currently going through an update.

- The Town lacks a continuity of government plan.
- Staff require additional training to improve capabilities to handle hazard event response and mitigation.
- National Grid and the Town DPW complete tree trimming in the Town but responsibilities are not confirmed.
- The Town completes outreach on hazards and hazard mitigation but would like to improve educational offerings and expand on topics.
- An update to date building inventory is necessary to provide data for planning and emergency response.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss property but other properties may be impacted by flooding as well. Areas prone to flooding Meadowbrook Road, Intersection of Haviland and Ridge Road, Bay Road between Pickle Hill Road and Route 149, Harris Bay Yacht Club Route 9L area, Big Boom, Arberger and Colby Drive Hudson River area, and the Canterbury Drive Glen Lake area.
- Senior housing facilities in the Town lack backup power. Current laws do not require a backup generator and buildings are only designed for 90 minutes of lighting if power is lost. Due to the rural nature of the County, power loss during severe storms is a consistent threat.
- Glens Falls Independent Living Center is located in the 1-percent floodplain. The facility is a critical facility but is privately owned.
- The Town of Queensbury has numerous Town owned critical facilities located in the 1-percent floodplain.

### 9.11.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this



plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

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**Table 9.11-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
TQB-1	Participate in the Community Rating System	Flood, Severe Storm		Town of Queensbury	No Progress			1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TQB-2 (carryover)	Integrate the risk assessment and recommendations of the hazard mitigation plan into the Town Comprehensive Plan.	All Hazards		Town Board, Planning Department	In Progress			1. Include in 2023 HMP 2. 3.
TQB-3	Develop a Continuity of Government Plan.	All Hazards		Fire Marshal, Town Board	In Progress			1. Include in 2023 HMP 2. 3.
TQB-4 (carryover)	Identify training opportunities	All Hazards		County, Town	In Progress			1. 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	for relevant staff (building code enforcement, fire marshal and community development) to better understand and identify opportunities for natural hazard risk reduction.					Damages Avoided; Evidence of Success		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TQB-5	Train staff in benefit cost analysis and in preparing grant applications for mitigation projects.	All Hazards		County, Town	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TQB-6	Work with National Grid to further develop and confirm tree removal responsibilities.	Severe Storm, Severe Winter Storm		Town DPW, Highway Department	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
TQB-7	Obtain funding to purchase generators for	Severe Storm		DPW	In Progress	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Damages Avoided; Evidence of Success		
	municipally-owned critical facilities, including backup power for Mountain Lakes EMS							<ol style="list-style-type: none"> <li>Project to be included in 2023 HMP or Discontinue</li> <li>If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
TQB-8	Diesel Bypass Pump – Queensbury Wastewater Department: A trash diesel pump to bypass sanitary sewer flow at our sewer pump stations in case of a lightning strike that damages electrical equipment such as our backup generator.	Severe Storm		DPW/Water & Wastewater Department	Complete	Cost Level of Protection		<ol style="list-style-type: none"> <li>Discontinue</li> <li>Complete</li> <li>Complete</li> </ol>
						Damages Avoided; Evidence of Success	Completed 2014	
TQB-9	Work with the County on a coordinated dam Safety program.	Flood		DPW	Ongoing Capability	Cost Level of Protection		<ol style="list-style-type: none"> <li>Discontinue</li> <li>Ongoing capability</li> <li>Ongoing capability</li> </ol>
						Damages Avoided;		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
						Evidence of Success		1. Project to be included in 2023 HMP or Discontinue
TQB-10	Conduct GIS mapping of all culverts, including details on culvert size, age, construction type, etc.	Flood		Planning Office, DPW, Contractor	Ongoing Capability	Cost		2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
						Level of Protection		3. If discontinue, explain why.
						Damages Avoided; Evidence of Success		
TQB-11 (carryover)	Educate residents regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earthquakes, and all other natural hazards) by developing, enhancing, and implementing education	Earthquake, Flood, Wildfire,		Town Board; Superintendent of school districts; County Office of Emergency Services	In Progress	Cost		1. Discontinue
						Level of Protection		2. Ongoing capability
						Damages Avoided; Evidence of Success		3. Include in 2023 HMP



## SECTION 9.11. Town of Queensbury

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities.							<ol style="list-style-type: none"> <li>Project to be included in 2023 HMP or Discontinue</li> <li>If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>If discontinue, explain why.</li> </ol>
TQB-12 (carryover)	Provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding.	Flood		Town Board, County/Local DPW	In Progress	Cost	Level of Protection	<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> <li>2.</li> <li>3.</li> </ol>
TQB-13 (carryover)	Educate the community on benefits of carrying NFIP policies and increase knowledge of NFIP services.	Flood, Severe Storm		Town Floodplain Administrator	In Progress	Cost	Level of Protection	<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> <li>2.</li> <li>3.</li> </ol>
TQB-14 (carryover)	Maintain a current inventory of	All Hazards		Town Board, County Office of Emergency Services	In Progress	Cost	Level of Protection	<ol style="list-style-type: none"> <li>1. Include in 2023 HMP</li> <li>2.</li> <li>3.</li> </ol>



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	at-risk buildings and infrastructure and continually update inventory of at-risk structures.					Damages Avoided; Evidence of Success		



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.11-15, the Town of Queensbury identified the following mitigation efforts completed since the last HMP:

- None identified

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Queensbury participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.11-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X		X	X	X	X			X
Severe Storm	X	X	X	X	X	X	X	X		X
Severe Winter Storm	X	X	X	X	X	X	X	X		X
Wildfire	X		X	X	X	X	X	X		X
Infestation	X		X	X	X	X	X	X		X
Dam Failure	X			X	X	X	X			X
Disease Outbreak	X			X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.11-17).

The table below summarizes the specific mitigation initiatives the Town of Queensbury would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.





Table 9.11-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Queensbury-001	Critical Facilities Backup Power	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm	<p><b>Problem:</b> Critical facilities require backup power to maintain essential functions during and after disaster events. Mountain Lakes EMS lacks a generator and the generator for Town Hall requires replacement.</p> <p><b>Solution:</b> The Town will purchase and install permanent fixed generators and necessary electrical components at critical facilities including Mountain Lakes EMS and Town Hall. DPW will be responsible for maintenance of the generators once installed. The generators will provide continuous power for services to ensure the health and safety of residents, businesses, and visitors. By providing power to municipal facilities and the department of public works, staff will be able to provide pre-, during, and post event services to communicate, monitor and respond to citizen issues. Services such as heat and cooling will be uninterrupted to</p>	Yes	None	Within 5 years	DPW	High	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.	HMGP, BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				support the needs of vulnerable populations, community alerts and rapid inspections and monitoring to be available for earthquake events, equipment fuel will be available during snow, wildfire, and wind events to maintain uninterrupted access to critical facilities										
2023-Town of Queensbury-002	Join the CRS Program	4	Flood	<b>Problem:</b> The Town currently does not participate in the Community Rating System. <b>Solution:</b> The Town will join the CRS program.	No	None	2 years	FPA	Staff time	Increased quality of floodplain administration, discounts on flood insurance premiums for residents	Town budget	High	LP R	PR
2023-Town of Queensbury-003	Comprehensive Plan Integration	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam	<b>Problem:</b> The Comprehensive Land Use Plan outlines short-term and long-term goals that will monitor the growth and development of the Town while enhancing economic health, walkability, environmental protection and quality of life for the Town residents and visitors. The Plan is currently going through an update.	No	None	1 year	Town Board, Planning Department	Low	Improved planning, integration	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Failure, Disease Outbreak	<b>Solution:</b> The Town will integrate the risk assessment and recommendations of the hazard mitigation plan into the Town Comprehensive Plan.										
2023-Town of Queensbury-004	Continuity of Government Plan	3, 4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure, Disease Outbreak	<b>Problem:</b> The Town lacks a continuity of government plan. <b>Solution:</b> The Town will develop and adopt a Continuity of Government Plan.	No	None	1 year	Fire Marshal, Town Board	Low	Improved planning, integration, continuity of government	Town budget	High	LP R	ES
2023-Town of Queensbury-005	Staff Training	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure,	<b>Problem:</b> Staff require additional training to improve capabilities to handle hazard event response and mitigation. <b>Solution:</b> The Town will identify training opportunities for relevant staff (building code enforcement, fire marshal and community development) to better understand and identify opportunities for natural hazard risk reduction. This will	No	None	Within 5 years	Administration, Town staff, County	Staff time	Improved staff capabilities	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Queensbury-006	Tree Trimming Agreements	5	Disease Outbreak Severe Storm, Severe Winter, Wildfire, Infestation	include benefit cost analysis to support grant applications.  <b>Problem:</b> National Grid and the Town DPW complete tree trimming in the Town but responsibilities are not confirmed.  <b>Solution:</b> The Town will work with National Grid to further develop and confirm tree removal responsibilities.	No	None	1 year	DPW, Administration, National Grid	Staff time	Agreements established and maintenance requirements understood	Town budget	High	LP, NSP	PR, NR
2023-Town of Queensbury-007	Improved Hazard Outreach	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Town completes outreach on hazards and hazard mitigation but would like to improve educational offerings and expand on topics.  <b>Solution:</b> The Town will undertake the following outreach initiatives: -Educate residents regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earthquakes, and all other natural hazards) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce	No	None	2 years	Town Board, Town DPW, FPA Superintendent of school districts; County Office of Emergency Services	Low	Improved public awareness	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				risk, and other outreach activities. -Provide residents with information listing steps taken to lessen potential flood damage to reduce the impact of flooding. -Educate the community on benefits of carrying NFIP policies and increase knowledge of NFIP services.										
2023-Town of Queensbury-008	Update Building Inventory	4	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> An update to date building inventory is necessary to provide data for planning and emergency response. <b>Solution:</b> The Town will use data from the HMP and other sources to maintain a current inventory of at-risk buildings and infrastructure and continually update inventory of at-risk structures.	No	None	2 years	Town Board, County Office of Emergency Services	Staff time	Improved data for disaster response, and planning purposes	Town budget	High	LP R	PR
2023-Town of Queensbury-009	Flood Damage Prevention Ordinance	1	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement. <b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Queensbury-010	Support Updated NFIP Mapping	4	Flood	<p><b>Problem:</b> The City of Glens Falls and the Towns of Lake Luzerne and Queensbury are currently in an active process to update NFIP mapping within the Hudson-Hoosic Watershed. FEMA and NYS DEC have presented work maps for the Hudson-Hoosic Watershed and are seeking public and stakeholder comment.</p> <p><b>Solution:</b> To the extent applicable and feasible, the Town shall use all available means of promoting broad local government and public involvement through announcing meetings and providing available supporting data as applicable.</p>	No	None	Within 5 years	FPA	Staff time	Improved floodplain mapping	Town budget	High	LP R	PR
2023-Town of Queensbury-011	Substantial Damage Procedures	1, 3, 4	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<p><b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.</p> <p><b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations. The Town will review current building and</p>	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	Municipal budget	High	LP R	PP / PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				zoning requirements to ensure proper alignment and make updates to the building and zoning code as necessary.										
2023-Town of Queensbury-012	Repetitive Loss Mitigation	1	Flood, Severe Storm	<p><b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss property but other properties may be impacted by flooding as well. Areas prone to flooding Meadowbrook Road, Intersection of Haviland and Ridge Road, Bay Road between Pickle Hill Road and Route 149, Harris Bay Yacht Club Route 9L area, Big Boom, Arberger and Colby Drive Hudson River area, and the Canterbury Drive Glen Lake area.</p> <p><b>Solution:</b> The Town will conduct outreach to 25 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required</p>	No	None	Within 5 years	FPA	High	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).										
2023-Town of Queensbury-013	Senior Housing Facility Backup Power	1, 2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm	<p><b>Problem:</b> Senior housing facilities in the Town lack backup power. Current laws do not require a backup generator and buildings are only designed for 90 minutes of lighting if power is lost. Due to the rural nature of the County, power loss during severe storms is a consistent threat.</p> <p><b>Solution:</b> The Town will complete outreach to senior housing facilities to discuss options for backup power.</p>	Yes	None	1 year	Administration	Staff time	Senior housing facilities aware of backup power needs and potential resources	Town budget	High	EAP	PI
2023-Town of Queensbury-014	Glens Falls Independent Living Center	1, 2	Flood	<p><b>Problem:</b> Glens Falls Independent Living Center is located in the 1-percent floodplain. The facility is a critical facility but is privately owned.</p> <p><b>Solution:</b> The FPA will conduct outreach to the facility manager to discuss flood risk at the facility and potential</p>	Yes	None	1 year	FPA	Staff time	Facility manager aware of flood risk and potential mitigation actions	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				mitigation measures to consider.										
2023-Town of Queensbury-015	Critical Facility Flood Mitigation	1	Flood	<p><b>Problem:</b> The Town of Queensbury has numerous Town owned critical facilities located in the 1-percent floodplain including:</p> <ul style="list-style-type: none"> <li>• HOVEY POND DAM</li> <li>• DREAM LAKE DAM</li> <li>• HALFWAY CREEK DAM</li> <li>• Halfway Brook Pumping Station</li> <li>• Queensbury Water Plant</li> <li>• Wastewater Pump Station</li> <li>• Low Lift Pumps</li> <li>• Two water wells</li> </ul> <p><b>Solution:</b> The Town Engineer will conduct a feasibility assessment at each critical facility located in the floodplain to determine flood exposure and potential mitigation actions to protect the facilities to the 0.2-percent flood level. Cost effective mitigation actions identified will be carried out.</p>	Yes	None	Within 5 years	Engineer	High	Flood risk for critical facilities reduced, critical services protected	HMGP, BRIC, PDM, Town budget	High	SIP	PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

Potential FEMA HMA Funding Sources:

Timeline:



CAV Community Assistance Visit  
CRS Community Rating System  
DPW Department of Public Works  
EHP Environmental Planning and Historic Preservation  
FEMA Federal Emergency Management Agency  
FPA Floodplain Administrator  
HMA Hazard Mitigation Assistance  
N/A Not applicable  
NFIP National Flood Insurance Program  
OEM Office of Emergency Management

FMA Flood Mitigation Assistance Grant Program  
HMGP Hazard Mitigation Grant Program  
BRIC Building Resilient Infrastructure and  
Communities Program

The time required for completion of the project upon implementation.


Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes  Critical Facility located in 1% floodplain

*Mitigation Category:*

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

*CRS Category:*

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.11-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Queensbury-001	Critical Facilities Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Queensbury-002	Join the CRS Program	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Queensbury-003	Comprehensive Plan Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Queensbury-004	Continuity of Government Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Queensbury-005	Staff Training	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Queensbury-006	Tree Trimming Agreements	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2023-Town of Queensbury-007	Improved Hazard Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Queensbury-008	Update Building Inventory	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Queensbury-009	Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Queensbury-010	Support Updated NFIP Mapping	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2023-Town of Queensbury-011	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2023-Town of Queensbury-012	Repetitive Loss Mitigation	1	1	1	0	0	1	0	1	1	1	1	0	1	1	10	High
2023-Town of Queensbury-013	Senior Housing Facility Backup Power	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023-Town of Queensbury-014	Glens Falls Independent Living Center	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Queensbury-015	Critical Facility Flood Mitigation	1	1	1	0	1	1	0	1	1	1	0	0	1	1	10	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.11.8 Action Worksheets

The following action worksheets were developed by the Town of Queensbury to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Critical Facilities Backup Power		
<b>Project Number:</b>	2023-Town of Queensbury-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm		
<b>Description of the Problem:</b>	Critical facilities require backup power to maintain essential functions during and after disaster events. Mountain Lakes EMS lacks a generator and the generator for Town Hall requires replacement.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Town will purchase and install permanent fixed generators and necessary electrical components at critical facilities including Mountain Lakes EMS and Town Hall. DPW will be responsible for maintenance of the generators once installed.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Critical Facilities Backup Power	
<b>Project Number:</b>	2023-Town of Queensbury-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of critical facilities
<b>Property Protection</b>	1	Project will protect buildings from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	All Hazards
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Public Works
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



## SECTION 9.

### 9.12 TOWN OF STONY CREEK

This section presents the jurisdictional annex for the Town of Stony Creek that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Stony Creek's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.12.1 Hazard Mitigation Planning Team

The Town of Stony Creek identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Town Supervisor and Town Board members. The Town Supervisor represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.12-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name/Title: Frank E. Thomas – Town Supervisor Address: 52 Hadley Road, Stony Creek, NY 12878 Phone Number: 518-696-3575 x302 Email: <a href="mailto:tscsupvr@frontier.com">tscsupvr@frontier.com</a>		Name/Title: Ed Lowell, Jr. – Councilman/Town Board Address: 52 Hadley Road, Stony Creek, NY 12878 Phone Number: 518-696-7162 Email: <a href="mailto:elowelljr@yahoo.com">elowelljr@yahoo.com</a>	
NFIP Floodplain Administrator			
Name/Title: Frank E. Thomas – Town Supervisor Address: 52 Hadley Road, Stony Creek, NY 12878 Phone Number: 518-696-3575 x302 Email: <a href="mailto:tscsupvr@frontier.com">tscsupvr@frontier.com</a>			
Additional Contributors			
Name/Title: Frank E. Thomas – Town Supervisor Method of Participation: Provided information on capabilities, NFIP administration, and the status of previous mitigation actions.			



### 9.12.2 Municipal Profile

The Town of Stony Creek is in the south-western corner of Warren County, in the southeast section of the Adirondack State Park. It is bordered by Warrensburg, Thurman, Hadley, Day and Wells. The entire Town is within the Adirondack Park

According to the U.S. Census, the 2020 population for the Town of Stony Creek was 758, a 1.2 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 3.4 percent of the population is 5 years of age or younger and 25.7 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Stony Creek has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 15.46% of the population does not have a high school diploma
- 19.77% of the population has a disability
- 3.56% of households do not have a vehicle
- 9.05% of the population is living below the poverty level
- 4.24% of the population is unemployed

### 9.12.3 Jurisdictional Capability Assessment and Integration

The Town of Stony Creek performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Stony Creek to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.



## Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Stony Creek. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.12-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Code	County	Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town adopted the New York State Uniform Fire Prevention and Building Code to guide safe new development. The Warren County Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code				
<b>Zoning/Land Use Code</b>	Yes	582.1 Local land use programs under the Adirondack Park Agency Act.	State, Local	Adirondack Park Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Under the Adirondack Park Agency Land Use Regulations, The APA is responsible for the following: A. Agency approval and local enactment of a local land use program B. Transfers to local government agency review jurisdiction over class B regional projects and variances from the shoreline restrictions C. Require the agency to apply certain of the standards and requirements of the local land use program in its review of class A regional projects				
<b>Subdivision Ordinance</b>	Yes	582.1 Local land use programs under the Adirondack Park Agency Act.	Local, State	Adirondack Park Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Under the Adirondack Park Agency Land Use Regulations, The APA is responsible for the following: A. Agency approval and local enactment of a local land use program B. Transfers to local government agency review jurisdiction over class B regional projects and variances from the shoreline restrictions C. Require the agency to apply certain of the standards and requirements of the local land use program in its review of class A regional projects				
<b>Site Plan Ordinance</b>	No	-	-	-
<b>Stormwater Management Ordinance</b>	No	-	-	-
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	–	–	–
<b>Environmental Protection Ordinance</b>	No	–	–	–
<b>Flood Damage Prevention Ordinance</b>	Yes	Local Law #1 – Flood Damage Prevention	Local	Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters D. Control filling, grading, dredging and other development which may increase erosion or flood damages E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands F. Qualify and maintain for participation in the National Flood Insurance Program				
<b>Wellhead Protection</b>	No	–	–	–
<b>Emergency Management Ordinance</b>	No	–	–	–
<b>Climate Change Ordinance</b>	No	–	–	–
<b>Other</b>	No	–	–	–
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	No	–	–	–
<b>Capital Improvement Plan</b>	No	–	–	–
<b>Disaster Debris Management Plan</b>	No	–	–	–



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Floodplain Management or Watershed Plan</b>	Yes	September 2020	Local in cooperation with County	Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk? This plan identifies regions flood issues to enable cooperative mitigation opportunities.</i>				
<b>Stormwater Management Plan</b>	No	-	-	-
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<b>Community Forest Management Plan</b>	No	-	-	-
<b>Transportation Plan</b>	No	-	-	-
<b>Agriculture Plan</b>	No	-	-	-
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<b>Tourism Plan</b>	No	-	-	-
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<b>Response/Recovery Planning</b>				
<b>Comprehensive Emergency Management Plan</b>	Yes	Warren County Comprehensive Emergency Management Plan	Local, County	Warren County OES, Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The County Comprehensive Emergency Management Plan (CEMP) enhances the County's ability to manage emergency/disaster situations. The Plan outlines a comprehensive approach to risk reduction before a disaster or emergency and identifies short and long-term recovery goals.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<b>Substantial Damage Response Plan</b>	No	-	-	-
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<b>Public Health Plan</b>	No	-	-	-
<b>Other</b>	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Stony Creek to oversee and track development.

**Table 9.12-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	No	-
<ul style="list-style-type: none"> <li>If you issue development permits, what department is responsible?</li> </ul>	N/A	-
<ul style="list-style-type: none"> <li>If you do not issue development permits, what is your process for tracking new development?</li> </ul>	N/A	Zoning compliance only, but there is no local zoning. County Codes requires this.
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"> <li>If you have a buildable land inventory, please describe</li> </ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	Very rural community, estimated 6 homes built per year.





## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Stony Creek and their current responsibilities that contribute to hazard mitigation.

**Table 9.12-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	Yes	Assistance through County Planning Office
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Town Board acts in this capacity when necessary.
Public Works/Highway Department	Yes	One highway supervisor and six full time staff are responsible for upkeep and maintenance of roads and stream crossings. One custodian/operator at the SC transfer station. Landfill accepts municipal debris from storm events.
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	Yes	Warren County OES and Sherriff, NYS Police, Stony Creek Fire Department, Stony Creek Rescue Squad (EMS)
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Culvert and ditch maintenance, trees and limbs, utilities upkeep
Mutual aid agreements	Yes	EMS with Warrensburg, Fire Dept – Luzerne, Thurman and Warrensburg, Shared municipal equipment – Thurman
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Adirondack Park Agency (APA)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Warren County Fire Prevention and Building Codes, Private contractors
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Warren County Planning Department
Environmental scientist familiar with natural hazards	Yes	Warren County SWCD
Surveyor(s)	No	-
Emergency Manager	Yes	Town Supervisor, Highway Superintendent, Fire Chief
Grant writer(s)	Yes	Warren County Planning Department
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-
<b>Administrative/technical capability self-assessment</b>		
<b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b>		
The Town has begun to alter how stream crossings are handled to ensure that a more proper sized and placed structure is designed and installed. The Highway department does the majority of this type of work, with assistance from Warren County SCWD.		

## Fiscal Capability

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

**Table 9.12-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Stony Creek.

**Table 9.12-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	One volunteer staff has general capabilities
Hazard mitigation information available on your website	Yes	<a href="https://www.stonycreekny.com/">https://www.stonycreekny.com/</a>
Social media for hazard mitigation education and outreach	Yes	Highway has a Facebook page that they periodically update
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	-

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Stony Creek.

**Table 9.12-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Unknown/to be determined	Unknown/to be determined
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	Warren County is certified	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and



withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction's capability to address related actions using the following classifications:

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

**Table 9.12-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	High
Severe Winter Storm	High
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

#### 9.12.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

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

The following table summarizes the NFIP statistics for the Town of Stony Creek.

**Table 9.12-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Stony Creek	0	4	\$2,355	0	0	0

Source: FEMA 2023

Notes: Number of policies based on publicly available data is unknown at this time.

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

#### Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Stony Creek.



Table 9.12-10. NFIP Summary

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>	Hildebrandt Road, Fodder Road, Van Auken Road, States Road Est, Louis Waite Road, and Roaring Branch Road. .No list of floodprone areas is maintained
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>	No list is maintained
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	Yes, DEC was working on Hudson/Sacandaga but the Town has no updates.
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	Unknown.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No. Maps are from 1986 and paper copies only.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Town Supervisor
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Not until new flood maps are produced.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	The FPA does not feel adequately supported and trained to fulfill the responsibilities of municipal Floodplain Administrator, and expressed interest in attending continuing education and/or certification training on floodplain management if offered in the County
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town FPA performs basic NFIP administration in the Town, and conducts education and outreach with regards to printed materials and notice of local training opportunities.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	County building codes
What are the barriers to running an effective NFIP program in the community, if any?	Small staff and lack of public education for understanding community benefit
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Local Law #1
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	None
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not Participating

### 9.12.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.12-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.12-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	1	N/A	2	N/A	1	N/A	1	N/A	1	N/A	2	N/A
Multi-Family	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Total New Construction Permits Issued	1	N/A	2	N/A	1	N/A	1	N/A	1	N/A	2	N/A

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2017 to Present					
None identified					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None identified					

SFHA Special Flood Hazard Area (1% flood event)

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

Note: Information on permits within the SFHA was unavailable for this planning process.



### 9.12.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Stony Creek's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Stony Creek has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.

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Figure 9.12-1. Town of Stony Creek Flood Hazard Area Extent and Location Map

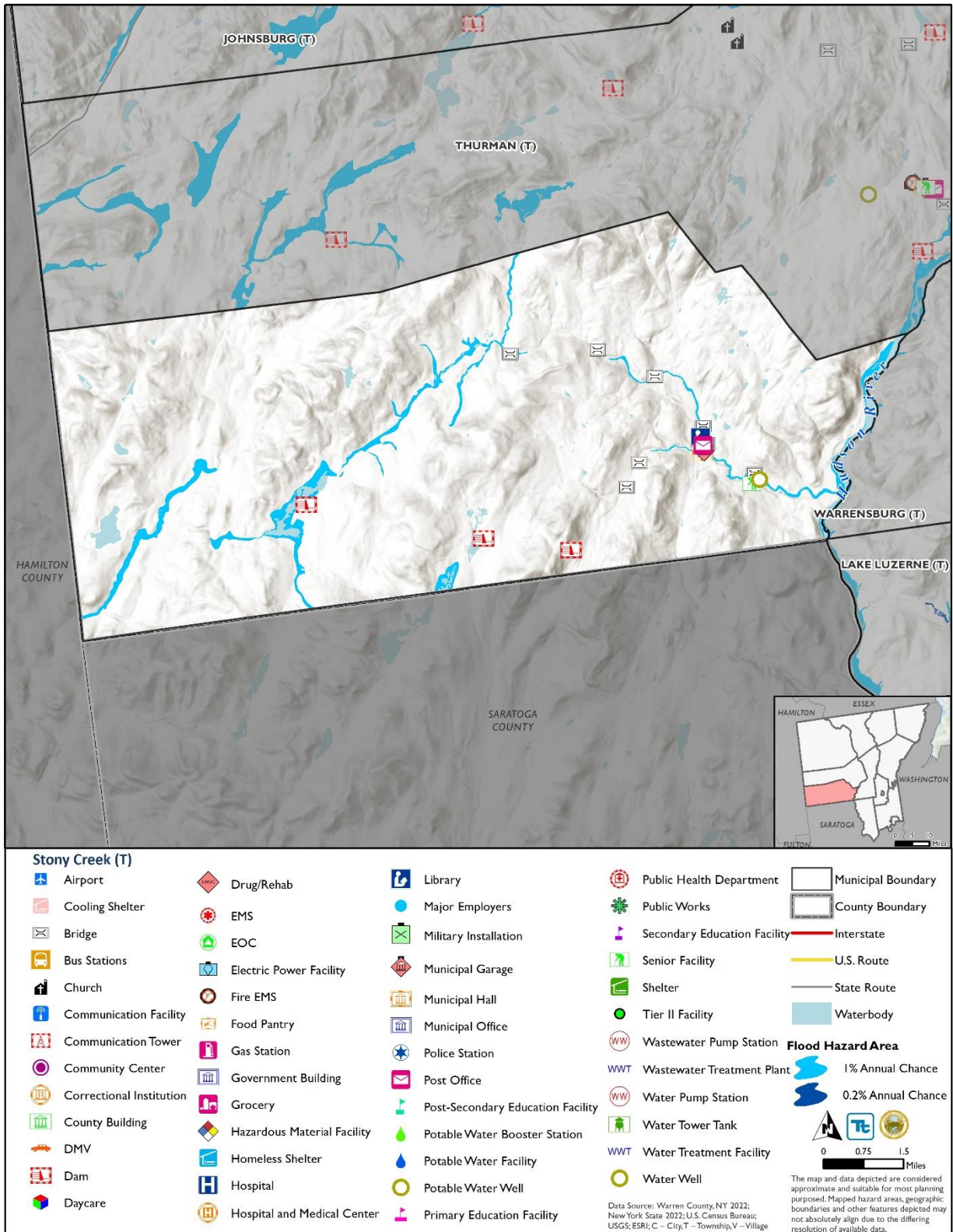




Figure 9.12-2. Town of Stony Creek Flood Earthquake (Soil Class) Hazard Area Extent and Location Map

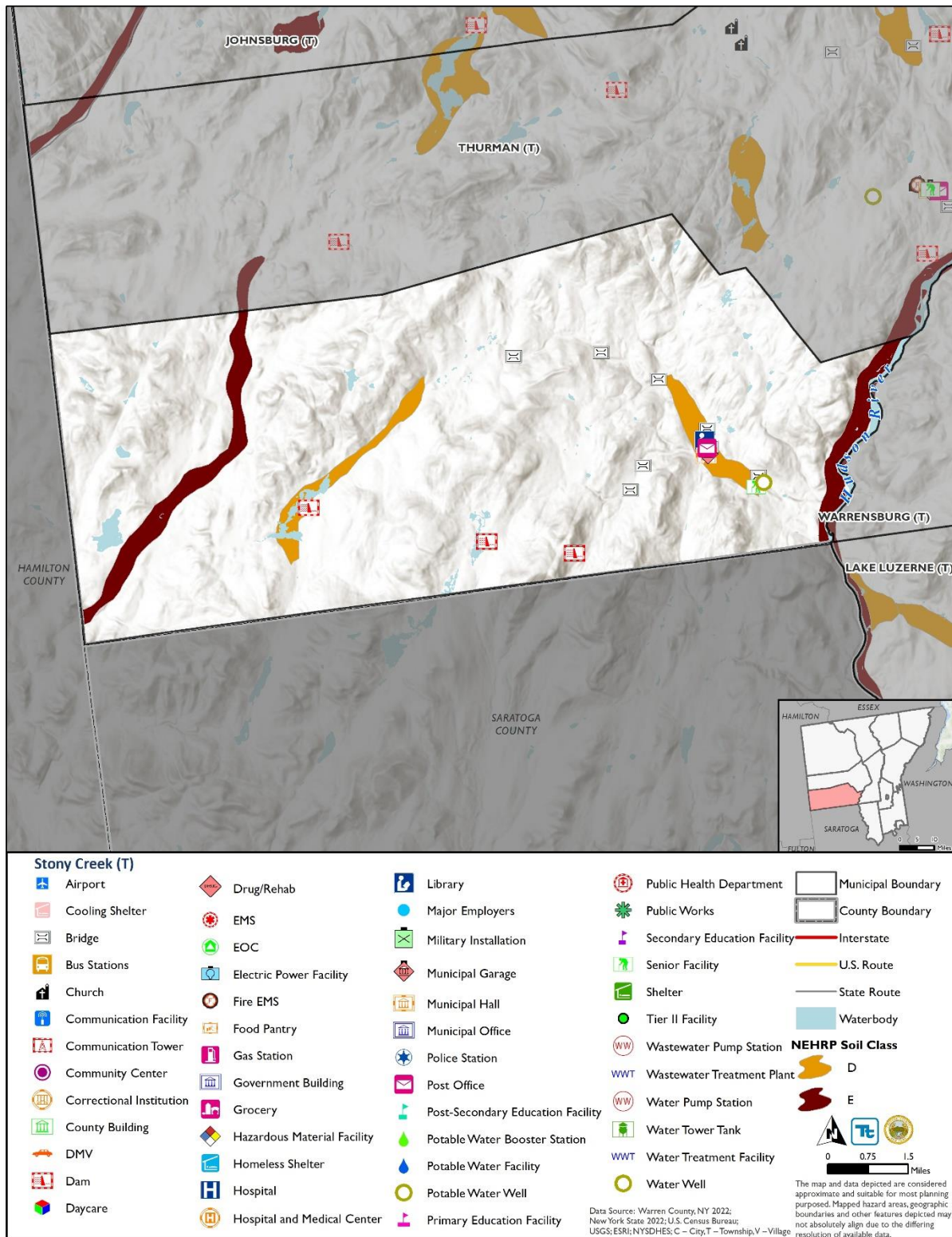
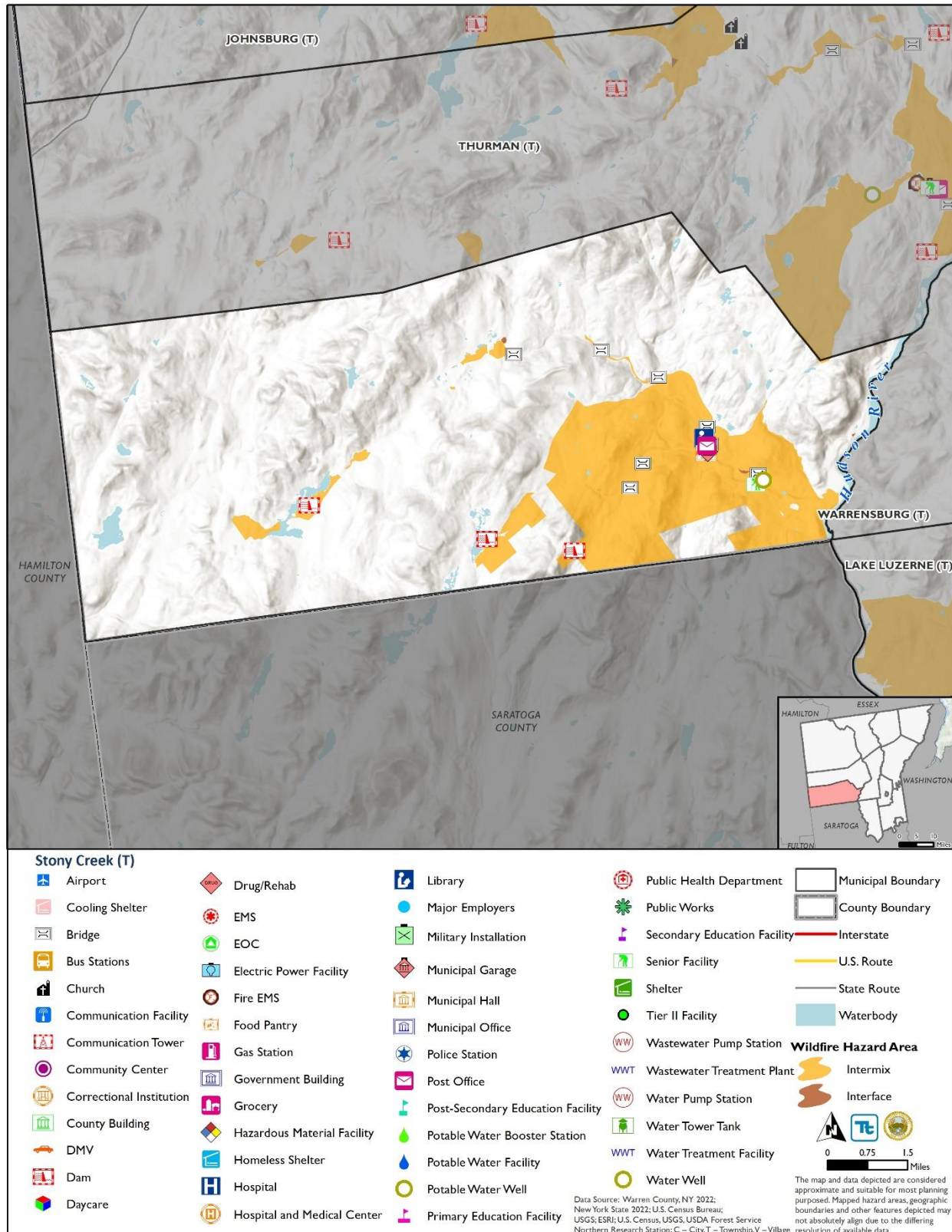






Figure 9.12-3. Town of Stony Creek Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Stony Creek's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.12-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.12-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	Although the County was impacted, the Town did not report significant damages.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19 .	The Town was subject to closures and social distancing/masking requirements.
September 2021	Beaver dam failure	No	Beaver dam failed.	Beaver dam failure damaged newly paved section of Roaring Branch Road.
April 18-19, 2022	Snowstorm	Yes	Heavy snowfall impacted the region.	Heavy snowfall caused power outages across the Town, along with road closures due to lines and



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
				poles down in the roadways.

Notes:

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

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Stony Creek's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Stony Creek. The Town of Stony Creek reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town agreed with the calculated hazard rankings.

**Table 9.12-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Low	Low	High	High	Low	Medium

Dam Failure	Disease Outbreak
Medium	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction



## Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.12-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Harrisburg Lake Dam	Dam	X	X	No action required.	Per NYDEC this is a low hazard dam and it is not rated. It is a recreational dam owned by Robert J. Sweet and it is not deemed required to be protected to the 0.2% flood level.
Warrensburg Road	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Stony Creek Center	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Lanfear	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Clarence White	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Grist Mill	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Warrensburg Road	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Stony Creek Center	Bridge	X	X	No action required.	This bridge is not identified as 'poor status' per the NY State highway inventory (2023)
Lanfear	Bridge	X	X	No action required.	BIN 3305650 This bridge is not identified as 'poor status' per the NY State highway inventory (2023)

Source: Warren County 2022

## Identified Issues

After review of the Town of Stony Creek's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Stony Creek identified the following vulnerabilities within their community:

- Undersized culverts in the Town contribute to flooding which can cause damages.



- Stream bank erosion is affecting private property on Roaring Branch Road. Some stabilization efforts have been made, but additional work is needed as a retaining wall has failed.
- The Town lacks a debris management plan to handle post-disaster cleanups.
- Additional flood education is needed for residents.
- A better understanding of building exposure data is needed for development and emergency planning.
- The floodplain administrator requires additional training.
- Additional training for wildfire response is needed for Town officials.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals.

### 9.12.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.





**Table 9.12-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
						Cost	Level of Protection	Damages Avoided; Evidence of Success
TSC-1	Upgrade undersized culverts on Hildebrandt Road, Fodder Road, Van Auken Road, States Road Est, Louis Waite Road, and Roaring Branch Road.	Flood, Severe Storm		Town Highway Department	No Progress			
TSC-2	Develop a partnership between public and private partners to monitor and address risk from beaver dams.	Flood		Supervisor, Town Highway Department	Ongoing Capability			
TSC-3	Integrate green infrastructure projects such as a bioswale in the town park.	Flood, Severe Storm		Supervisor, Town Council	No Progress			
TSC-4	Roaring Branch Road Stream Bank stabilization – Stream bank erosion affecting private property. Some stabilization efforts have been made,	Flood, Severe Storm	Stabilization in progress, dealing with a failed retaining wall.	Town Highway Department	In Progress			



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
	but additional work is needed.					Cost		1. Project to be included in 2023 HMP or Discontinue
TSC-5 (carryover)	Obtain funding to purchase designated backup power generators for municipally-owned critical facilities, including the DPW facility at 48 Hadley Road.	All Hazards	Town Hall, Fire Dept and Highway garage -all have back up power	Town Highway Department	Complete	Level of Protection		2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
						Damages Avoided; Evidence of Success		3. If discontinue, explain why.
TSC-6 (carryover)	Develop plans for debris management after hazard events, including severe winter snow/ice events, and other severe storms.	Earthquake, Flood, Severe Storm, Severe Winter Weather, Wildfire	Work with adjacent committees to develop a localized plan	Town Highway Department	No Progress	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
TSC-7 (carryover)	Educate the community on steps taken to lessen potential flood damage to reduce the impact of flooding, and on the benefits of carrying NFIP policies.	Flood, Severe Storm	Will look to include info on specific town website page for landowners and flooding.	Town Supervisor, Warren County OES	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3.
TSC-8	Review and update local comprehensive emergency plan to integrate education and outreach goals, objectives, and activities from this HMP.	All Hazards	Plan update anticipated in 2023.	Town Supervisor	No Progress	Cost		1. Include in 2023 HMP
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3
TSC-9					No Progress	Cost		1. Include in 2023 HMP

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps	
						Level of Protection	Damages Avoided; Evidence of Success	1. Project to be included in 2023 HMP or Discontinue	2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).
(carryover)	Maintain a current inventory of at-risk buildings and infrastructure and continually update inventory of at-risk structures in each jurisdiction.	Earthquake, Flood, Severe Storm, Severe Winter Weather, Wildfire		1. Town Highway Department, APA		Level of Protection		2.	3.
						Damages Avoided; Evidence of Success			
TSC-10 (carryover)	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections.	Flood, Severe Storm		Town Supervisor/FPA	No Progress	Cost		1. Include in 2023 HMP	2.
						Level of Protection		3.	
						Damages Avoided; Evidence of Success			
TSC-11 (carryover)	Send a town representative to the NYS Wildland Fire Suppression Training.	Wildfire	Looking to send in 2023/24	Fire Marshal	No Progress	Cost		1. Include in 2023 HMP	2.
						Level of Protection		3.	
						Damages Avoided; Evidence of Success			



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.12-15, the Town of Stony Creek identified the following mitigation efforts completed since the last HMP:

- Town Hall – installed 10kw auto generator (area of refuge)
- Fire Department – stand by generator
- Highway Garage – manual generator

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Stony Creek participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.12-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X				X	X				X
Extreme Temperature	X			X	X	X	X			X
Flood	X	X	X	X	X	X	X	X	X	X
Severe Storm	X	X	X		X	X		X	X	X
Severe Winter Storm	X				X	X				X
Wildfire	X				X	X				X
Infestation	X			X	X	X	X			X
Dam Failure	X				X	X				X
Disease Outbreak	X			X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.12-17).

The table below summarizes the specific mitigation initiatives the Town of Stony Creek would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.12-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Stony Creek -001	Culvert Upsizing	1	Flood, Severe Storm	<b>Problem:</b> Undersized culverts in the Town contribute to flooding which can cause damages. <b>Solution:</b> The Town Highway Department will upgrade undersized culverts on Hildebrandt Road, Fodder Road, Van Auken Road, States Road Est, Louis Waite Road, and Roaring Branch Road.	No	May require permitting at some locations	Within 5 years	Town Highway Department	High	Reduction in flooding, flood damages to culverts and roadways	HMGP, BRIC, PDM, CHIPS, Town budget	High	SIP	SP
2023-Town of Stony Creek -002	Roaring Branch Road Stream Bank Stabilization	5	Flood, Severe Storm	<b>Problem:</b> Stream bank erosion is affecting private property on Roaring Branch Road. Some	No	May require permitting	Within 5 years	Town Highway Department	High	Reduction in flood damage risk	HMGP, BRIC, PDM, Town budget	High	NSP	NR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>stabilization efforts have been made, but additional work is needed as a retaining wall has failed.</p> <p><b>Solution:</b> The Town will evaluate stream bank stabilization options along Roaring Branch Road and construct necessary streambank stabilization measures, including repairs to an existing failing retaining wall.</p> <p><b>Solution:</b> The Town will evaluate stream bank stabilization options along Roaring Branch Road and construct</p>										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				necessary streambank stabilization measures, including repairs to an existing failing retaining wall.										
2023-Town of Stony Creek -003	Disaster Debris Management Plan	3	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> The Town lacks a debris management plan to handle post-disaster cleanups. <b>Solution:</b> The Town will work with adjacent committees to develop a localized disaster debris management plan and integrate with the County plan.	No	None	Within 5 years	Town Highway Department	Low	Better post-disaster planning	BRIC, PDM, Town budget	High	LPR	ES
2023-Town of Stony Creek -004	Flood Education	2	Flood	<b>Problem:</b> Additional flood education is needed for residents.	No	None	2 years	FPA, Town Supervisor, Warren County OES	Low	Increased flood awareness, NFIP coverage	Town budget	High	EAP	PI





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will educate the community on steps taken to lessen potential flood damage to reduce the impact of flooding, and on the benefits of carrying NFIP policies. In addition, the Town will include this information on a specific Town website page for landowners and flooding.										
2023-Town of Stony Creek -005	Establish Building Inventory	4	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> A better understanding of building exposure data is needed for development and emergency planning.	No	None	Within 5 years	Town Highway Department, APA	Staff time	Increased capabilities, better planning	Town budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> Using information from the HMP as a base, the Town will maintain a current inventory of at-risk buildings and infrastructure and continually update inventory of at-risk structures in each jurisdiction.										
2023-Town of Stony Creek-006	FPA Training	4	Flood	<b>Problem:</b> The floodplain administrator requires additional training. <b>Solution:</b> The Town will send the FPA to available training from NYS and FEMA and consider certified	No	None	2 years	FPA, Administration	Staff time	Increase floodplain administration capabilities	Town budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				floodplain manager training.										
2023-Town of Stony Creek -007	Wildland Fire Suppression Training	4	Wildfire	<b>Problem:</b> Additional training for wildfire response is needed for Town officials. <b>Solution:</b> The Town will send a representative to the NYS Wildland Fire Suppression Training.	No	None	Within 5 years	Fire Marshal, Administration	Staff time	Increased wildfire emergency response capabilities	Town budget, NY	High	LPR	ES
2023-Town of Stony Creek -008	Flood Damage Prevention Ordinance Update	1	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.										
2023-Town of Stony Creek -009	Substantial Damage Procedures	1, 3	All Hazards	<b>Problem:</b> While major events that result in substantial damage of structures are rare, municipalities need to have official procedures in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The Town will develop official procedures	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements , improved floodplain administration	Municipal Budget	High	LPR	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				for Substantial Damage and Substantial Improvement determinations.										
2023-Town of Stony Creek -010	Public Outreach and Awareness Program	1, 2	Extreme Temperature, Infestation, Disease Outbreak	<b>Problem:</b> The Town needs to increase public outreach and awareness of hazard reduction and public health measures through improving information accessible to the public. The town will conduct and improve community and public education and awareness to promote hazard risk reduction. The town will provide educational	No	None	2 years	Town	Staff time	Increased public	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				materials on the town website on hazard risk reduction for extreme temperature and disease outbreak to reduce impacts on public health. Educational materials and public notice information on infestation hazards will also be provided on the website. <b>Solution:</b> The town will conduct and improve community and public education and awareness to promote hazard risk reduction. The town will provide										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				educational materials on the town website on hazard risk reduction for extreme temperature and disease outbreak to reduce impacts on public health. Educational materials and public notice information on infestation hazards will also be provided on the website.										

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:


A description of the estimated benefits, either quantitative and/or qualitative.





OEM Office of Emergency Management

**Critical Facility:**

Yes  Critical Facility located in 1% floodplain

**Mitigation Category:**

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.12-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Stony Creek-001	Culvert Upsizing	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2023-Town of Stony Creek-002	Roaring Branch Road Stream Bank Stabilization	0	1	1	0	1	0	0	1	1	1	1	0	1	1	9	High
2023-Town of Stony Creek-003	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Stony Creek-004	Flood Education	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Stony Creek-005	Establish Building Inventory	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Stony Creek-006	FPA Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Stony Creek-007	Wildland Fire Suppression Training	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Stony Creek-008	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Stony Creek-009	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Stony Creek-010	Public Outreach and Awareness Program	1	0	1	1	1	0	1	0	1	1	1	1	0	0	9	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.12.8 Action Worksheets

The following action worksheets were developed by the Town of Stony Creek to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Culvert Upsizing		
<b>Project Number:</b>	2023-Town of Stony Creek-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Undersized culverts in the Town contribute to flooding which can cause damages.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town Highway Department will upgrade undersized culverts on Hildebrandt Road, Fodder Road, Van Auken Road, States Road Est, Louis Waite Road, and Roaring Branch Road.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	TBD by final design	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, flood damages to culverts and roadways
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, PDM, HMGP, CHIPS, Town budget
<b>Responsible Organization:</b>	Town Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove culverts	N/A	Culverts cannot be removed
	Relocate roadways	N/A	Not feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
Project Name:	Culvert Upsizing	
Project Number:	2023-Town of Stony Creek-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduction in flood damages to culverts and roadways
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	May require permitting
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	Within 5 years
Agency Champion	1	Town Highway Department
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



## SECTION 9.

### 9.13 TOWN OF THURMAN

This section presents the jurisdictional annex for the Town of Thurman that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Thurman's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.13.1 Hazard Mitigation Planning Team

The Town of Thurman identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Town Supervisor and Highway Superintendent. The Town Supervisor and Town Board represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.13-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name/Title: Debra Runyon – Town Supervisor Address: 311 Athol Road, Athol NY 12810 Phone Number: 518–623–9649 x101 Email: <a href="mailto:supervisor@thurmanny.gov">supervisor@thurmanny.gov</a>		Name/Title: Patrick Wood – Highway Superintendent Address: P.O. Box 29 Athol, NY 12810 Phone Number: 518–623–9649 x104 Email: <a href="mailto:highwaydept@yahoo.com">highwaydept@yahoo.com</a>	
NFIP Floodplain Administrator			
Name/Title: Debra Runyon / Supervisor Address: 311 Athol Road, Athol NY 12810 Phone Number: 518–623–9649 x101 Email: <a href="mailto:supervisor@thurmanny.gov">supervisor@thurmanny.gov</a>			
Additional Contributors			
Name/Title: Town Board Method of Participation: provided data and information			
Name/Title: Debra Runyon – Town Supervisor			





Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided information on capabilities, status of previous mitigation actions. Contributed to risk rankings and mitigation strategy development.	

### 9.13.2 Municipal Profile

The Town of Thurman is in the western portion of Warren County. The Town is bordered on the east by the Hudson River and on the west by Hamilton County. It has a total land area of 92.8 square miles of which 91.3 square miles is land and 1.5 square miles is water. The Town of Thurman includes the hamlets of Thurman (location of Town Hall) and Chestertown. Garnet Lake is located within the Town.

According to the U.S. Census, the 2020 population for the Town of Thurman was 1,095, a 10.2 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 2.9 percent of the population is 5 years of age or younger and 29.2 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Thurman has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 15.46% of the population does not have a high school diploma
- 19.77% of the population has a disability
- 3.56% of households do not have a vehicle
- 9.05% of the population is living below the poverty level
- 7.94% of the population is unemployed

### 9.13.3 Jurisdictional Capability Assessment and Integration

The Town of Thurman performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis,



planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Thurman to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Thurman. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.13-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Code	County	Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Thurman adopted the New York State Uniform Fire Prevention and Building Code to guide safe new development. The Warren County Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Zoning/Land Use Code	Local, County	Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The zoning/land use code requires a minimum of 3 acres zoning to build.				
<b>Subdivision Ordinance</b>	Yes	Subdivision Regulations for the Town of Thurman, 2006	Local	Town Board.
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The regulations provide for the provision of adequate community facilities, set high standards for development, and promote the public health, safety, and welfare of all citizens.				
<b>Site Plan Ordinance</b>	Yes	Zoning/Land Use Code	Local, County	Warren County Fire Prevention and Building Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Site plan review is completed at the County level.				
<b>Stormwater Management Ordinance</b>	No	-	-	-
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	–	–	–
<b>Environmental Protection Ordinance</b>	No	–	–	–
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Flood Damage Prevention Ordinance</b>	Yes	Flood Damage Prevention Ordinance	Federal, State, County and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters. D. Control filling, grading, dredging and other development which may increase erosion or flood damages E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands F. Qualify and maintain for participation in the National Flood Insurance Program.  The ordinance currently lacks a freeboard requirement and requires update to meet the state’s 2 feet of freeboard requirement.				
<b>Wellhead Protection</b>	No	–	–	–
<b>Emergency Management Ordinance</b>	No	–	–	–
<b>Climate Change Ordinance</b>	No	–	–	–
<b>Other</b>	No	–	–	–
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	No	–	–	–
<b>Capital Improvement Plan</b>	No	–	–	–



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Disaster Debris Management Plan	No	-	-	-
Floodplain Management or Watershed Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	No	-	-	-
Urban Water Management Plan	No	-	-	-
Habitat Conservation Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Community Wildfire Protection Plan	No	-	-	-
Community Forest Management Plan	No	-	-	-
Transportation Plan	No	-	-	-
Agriculture Plan	No	-	-	-
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	No	-	-	-
Other (for example NYRCR, etc.)	No	-	-	-
<b>Response/Recovery Planning</b>				
Comprehensive Emergency Management Plan	Yes	Emergency Action Plan	Local	Warren County
How has or will this be integrated with the HMP and how does this reduce risk?				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The Chairman of the Warren County Board of Supervisors is ultimately responsible for county emergency response activities. The chairman controls all county owned resources and facilities for disaster response. The sheriff's office is in charge of communications. The American Red Cross is in charge of operations and temporary housing, food and clothing.				
Continuity of Operations Plan	No	-	-	-
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Public Health Plan	Yes	Public Employer Health Emergency Plan	Local	Warren County
How has or will this be integrated with the HMP and how does this reduce risk? The Plan was developed in accordance with the amended New York State Labor Law section 27-c and New York State Education Law paragraphs k and l subdivision 2 of section 2801-a. which requires public employers to adopt a plan for operations in the event of a declared public health emergency involving communicable disease.				
Other	No	-	-	-

## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Thurman to oversee and track development.

**Table 9.13-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	No	-
• If you issue development permits, what department is responsible?	N/A	-
• If you do not issue development permits, what is your process for tracking new development?	N/A	New development would go through the APA and County Building Code Enforcer
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	The County Code Enforcer would track this type of development.
Do you have a buildable land inventory?	No	-
• If you have a buildable land inventory, please describe	N/A	-



Indicate if your jurisdiction implements the following	Yes/No	Comment:
Describe the level of build-out in your jurisdiction.	N/A	There is minimum build-out in Thurman.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Thurman and their current responsibilities that contribute to hazard mitigation.

**Table 9.13-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Town Highway Department is responsible for stormwater maintenance, tree trimming, etc.
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	All maintenance of this type is done by the Highway Department.
Mutual aid agreements	Yes	Shared Services agreement with the Town of Stony Creek
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	No	The Town contracts with a local engineering firm.
Engineers or professionals trained in building or infrastructure construction practices	No	The Town contracts with an engineering firm.
Planners or engineers with an understanding of natural hazards	No	The Town contracts with an engineering firm.
Staff with expertise or training in benefit/cost analysis	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Professionals trained in conducting damage assessments	Yes	The Highway Superintendent has 27 years of experience in dealing with the numerous culvert failures, ice jams and floods that the Town has experienced.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	County Staff
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Warren County
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	The Town would rely on the Engineer for any major repairs and the effect they would have on the environment.
<b>Administrative/technical capability self-assessment</b>		
<b>Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.</b>		
The long term experience the Town Highway Department employees have dealing with ice jams, floods, and stormwater runoff is relied upon to handle the assessment of hazards and the implementation of corrective actions.		

## Fiscal Capability

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

**Table 9.13-5. Fiscal Capabilities**

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

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Thurman.



**Table 9.13-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	The Town contracts with a website developer.
Hazard mitigation information available on your website	No	The Town is establishing a new website that will have options to post hazard mitigation information. The town clerk is learning how to use the new website and will include this as soon as she can. We did announce this at our meeting Feb 16 <sup>th</sup> and it is listed in our minutes as well.
Social media for hazard mitigation education and outreach	No	The Town is establishing a new website that will have Facebook and social media options.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	N/A	The Town of Thurman does not have a school located within the Town.
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	Yes	As a small town, residents calling each other or posting on Thurman Happenings would be the existing method of getting the word out.

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Thurman.

**Table 9.13-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	(Warren County is certified)	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable



## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.13-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.13.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Thurman.

**Table 9.13-9. NFIP Summary**

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Thurman	3	5	\$85,530	0	0	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.



*RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.*

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Thurman.

**Table 9.13-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Any flood hazard maps would definitely identify the Hudson River as an area of flooding. Roads with old culverts are also a concern. The Assessor's office would be familiar with the flood risk areas. Most flood damage is to roads/bridges, not homes. The primary reoccurring roads are Dippikill, W. Stony Creek Road, Bear Pond Rd, Wolf Pond Road and Cameron Road.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	The Town does not maintain a list. To the Town's knowledge, no property owners are interested in mitigation at this time.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	Unknown
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	Damage concerns focus on the roads, culverts and bridges. The Highway Superintendent would make that determination.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	None that the Town is aware of.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	Any flood hazard maps would definitely identify the Hudson River as an area of flooding. Roads with old culverts are also a concern. The Assessor's office would be familiar with the flood risk areas.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Town Board
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	The Town has access to County information and the internet.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	Staff could benefit from training and assistance in identifying the areas most impacted and the options available to us for possible resources to mitigate the hazards. The supervisor will meet with the Highway Superintendent to discuss vulnerable areas and determine the proper course of action. Due to cost barriers, online CRS



NFIP Topic	Comments
	and NAI webinars that are offered for free from the ASFM website could be utilized.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Plans will be put in place to conduct training workshops, public outreach.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	The assessor's office and/or the County Inspector would make that determination.
What are the barriers to running an effective NFIP program in the community, if any?	Lack of staffing and funds.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	June 23, 1993
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> <li>What is the date that your flood damage prevention ordinance was last amended?</li> </ul>	Local Law #11987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>	Meet the minimum NFIP standards.
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Town does not have a planning or zoning board. A site plan review would be done by the County.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Town is interested in exploring the CRS program as an option.

### 9.13.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.13-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.13-11. Recent and Expected Future Development**

Type of Development	2017	2018	2019	2020	2021	2022
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)						
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA



Type of Development	2017		2018		2019		2020		2021		2022	
Single Family	3	-	1	-	1	-	2	-	3	-	4	-
Multi-Family	0	-	0	-	0	-	0	-	0	-	0	-
Other (commercial, mixed-use, etc.)	0	-	0	-	1	-	0	-	1	-	0	-
<b>Total New Construction Permits Issued</b>	<b>3</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>4</b>	<b>-</b>
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
Recent Major Development and Infrastructure from 2017 to Present												
None identified												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated												

SFHA Special Flood Hazard Area (1% flood event)

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

### 9.13.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Thurman's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Thurman has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.





Figure 9.13-1. Town of Thurman Hazard Area Extent and Location Map 1

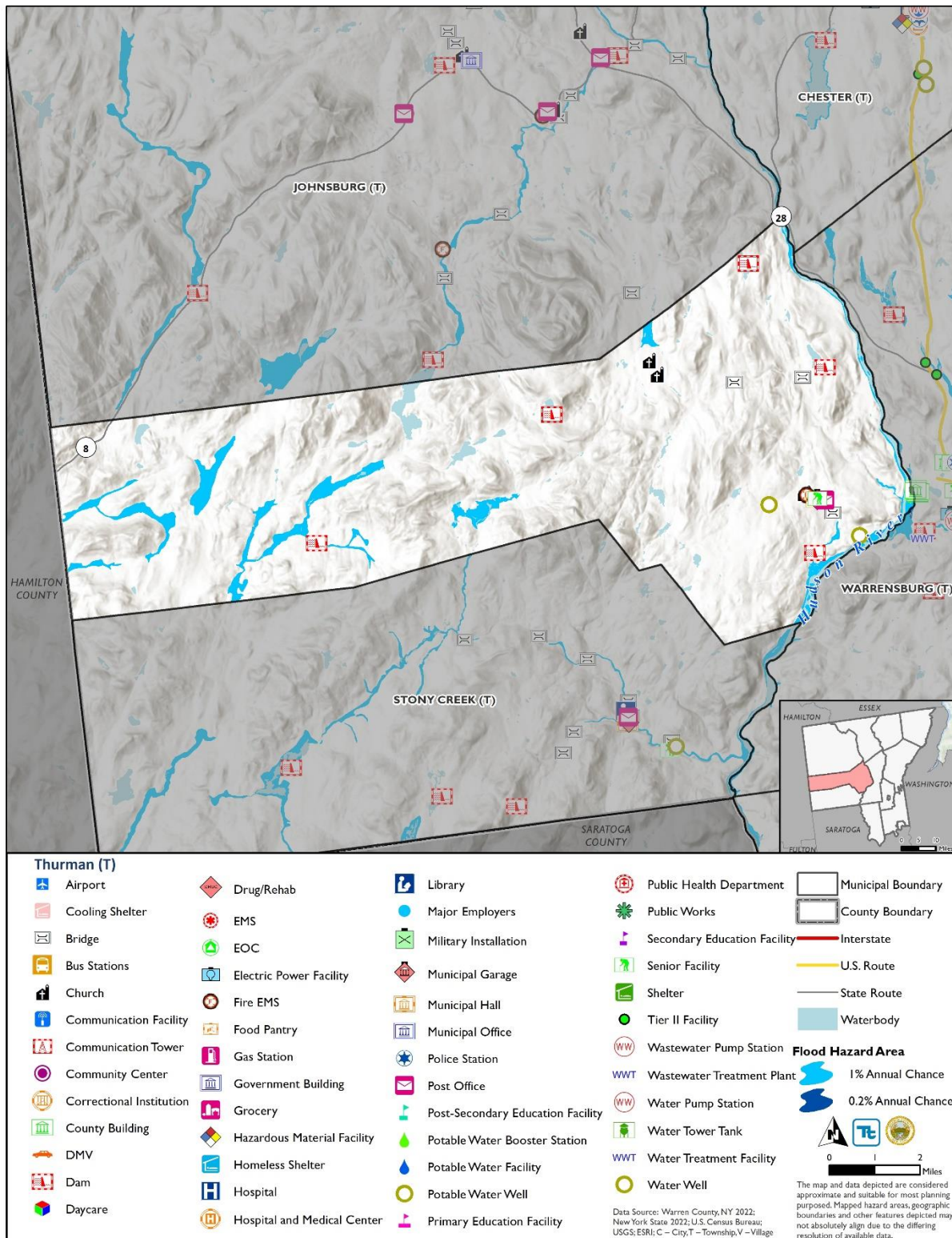




Figure 9.13-2. Town of Thurman Earthquake (Soil Class) Hazard Area Extent and Location Map

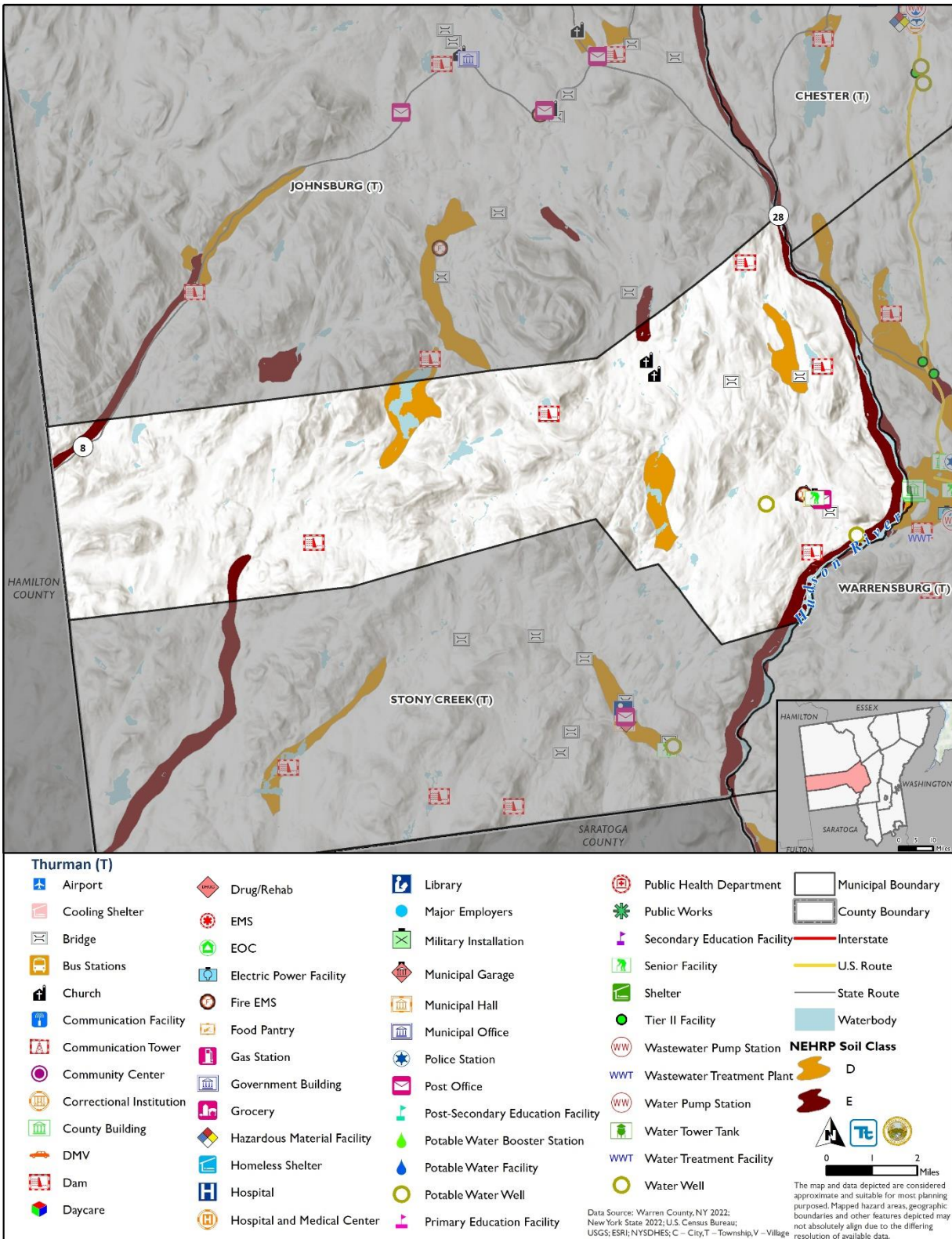
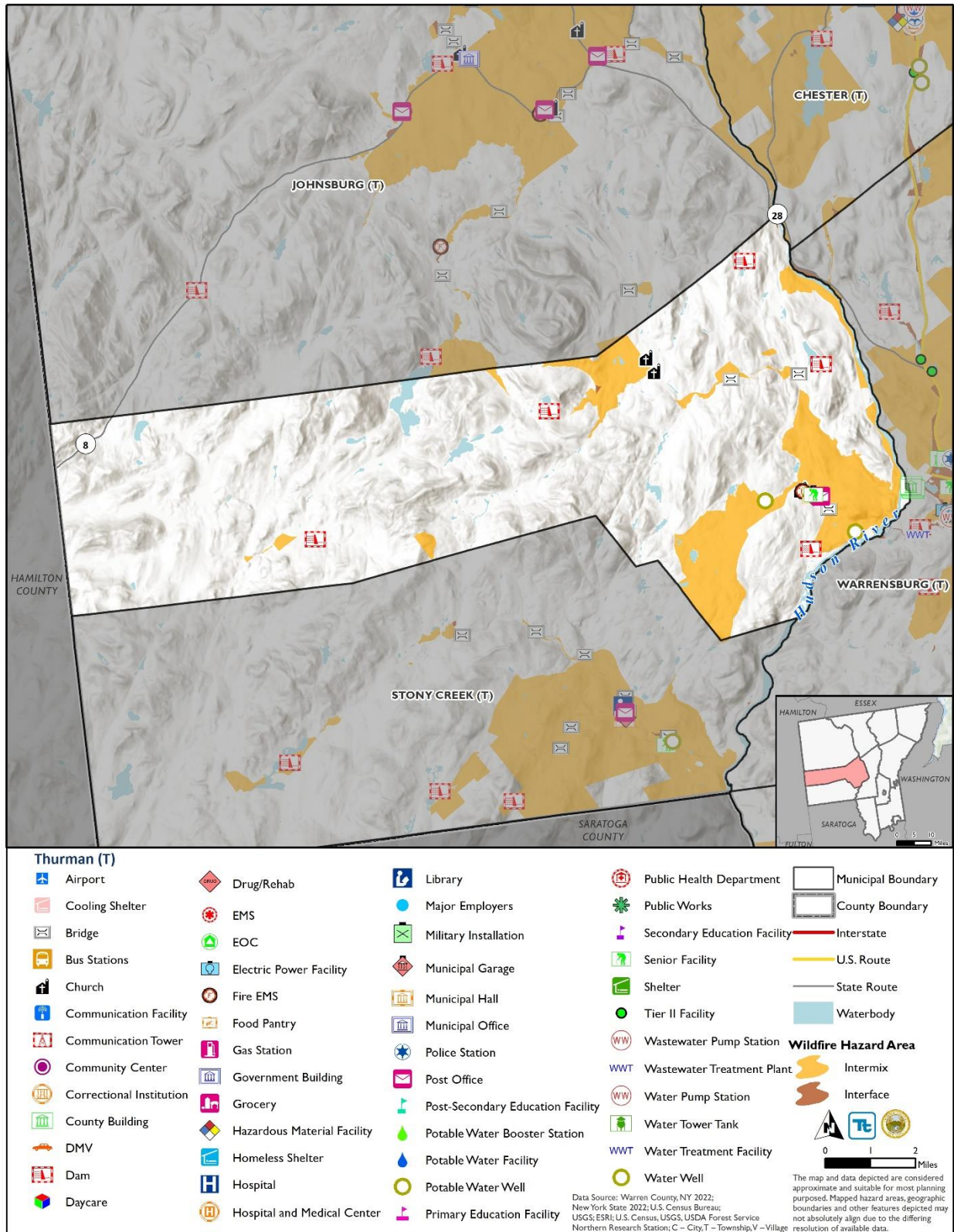






Figure 9.13-3. Town of Thurman Wildfire Hazard Area Extent and Location Map





## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Thurman's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.13-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.13-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January to February 2018	Ice Jam	No	Ice Jam/ Flooding	Large sections of ice came up the bank and caused River Road to close. A large section of the road actually fell into the River. The Highway Department was able to secure property further from the river and actually built a new road further from the river in that section.
April 15, 2019	Thunderstorm/Wind	No	Downed trees	Glen Athol Road was closed due to many downed trees.
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power	Eleven roads were closed due to damage from flash flooding. In particular Dippikill Road had clogged culverts due to debris and increased flow which washed out the road causing some residents to detour to get around. The flow of water over the two culverts resulted in undermining the stability of the road. There were residents who were trapped in their homes. The road caved in while a Highway employee was driving over the double culvert area. This could have resulted in the loss



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			outages over eastern New York.	of the truck and/or death of the employee.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19 .	Loss of the use of the town hall due to building closure. Loss of revenue for the expense of a hired daily cleaner to sanitize the town hall
2021	Flooding	No	Flooding	The culvert on Frank King Road was compromised and the road washed out. The culvert was replaced. Dippikill Road washed out due to flooding because the ditches that were cut there could not handle the flow of water after the culverts were blocked with debris.
February 19, 2022	Ice Jam	No	The ice flow on the Hudson River jammed up causing the ice to go up over the bank and cross River Road.	The 418 Bridge was closed, River Road was closed. This caused residents to have to detour around to Route 28. The Town had to spend many man hours clearing River Road. An excavator and driver was hired to remove large chunks of ice that were broken up by the highway department running payloaders. It took over a week to clear it.

**Notes:**

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

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Thurman's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1,



Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Thurman. The Town of Thurman reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town changed the hazard ranking for extreme temperature from medium to low, nothing that although climate change may increase the occurrence of extreme temperature events, there is not likely to be an impact of quality of life in the Town.
- The Town agreed with the remaining calculated hazard rankings.

**Table 9.13-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Low	Low	Low	High	High	Low	Medium

Dam Failure	Disease Outbreak
Medium	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).





The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.13-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Number Nine Brook Dam	Dam	X	X	-	Yes, no issues are noted with the dam design.
Cameron	Bridge	X	X	-	The Cameron Bridge near Stony Creek Road washed out in 2022 and has since been totally redone by Warren County.

Source: Warren County 2022

## Identified Issues

After review of the Town of Thurman's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Thurman identified the following vulnerabilities within their community:

- The most hazardous area in Thurman is Dippikill Road near Parker Cross Road (Patterson Brook). It is affected every winter. There are two old metal culverts side by side. They rust. The way the river turns there causes debris washing down to get caught up and block the flow. Then the water goes up and over the road causing washouts, closures, detours, trapped residents. The only remedy Thurman can afford is to fix the road in the same manner. This year the Highway Department was able to afford to hire a blasting company to blast the granite rock that prevented an adequate ditch from being dug that would help the water flow away from the road. This road has been the cause of FEMA mitigation in the past. The Halloween Storm did severe damage, but it was also damaged in the May 2011 storm, and just about every year it requires some type of repair.
- There is a culvert to lead water to the drainage ditch which moves the water under the road leading to the salt shed. This reduces the flood risk to the highway garage, road, and private residence.
- The records room used to be on the second floor, which was transformed into needed office space. Records were then moved to the basement on shelves that are 15 inches off the floor. Town Hall has a history of basement flooding. Records should be scanned and maintained electronically to reduce risk of losing records during a flood.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- The Town website lacks information on hazards and hazard mitigation.



- The floodplain administrator requires additional training.
- The Town has limited sheltering capabilities.
- There are culverts in town that are very old, rusty metal. Some are two culverts placed side by side which clog and cause flooding.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.

### 9.13.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

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The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



**Table 9.13-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
TTH-1 (carryover)	Address drainage and flooding issues throughout the town by installing bottomless culverts or other drainage improvements at locations including: <ul style="list-style-type: none"> <li>• Wolf Pond Road</li> <li>• Dippikill Road near Parker Cross Road (Patterson Brook)</li> <li>• River Road at Huber Road</li> <li>• Athol Road near Cameron Road</li> </ul>	Flood	There are culverts in town that are very old, rusty metal. Some, like the one on Dippikill, are two culverts placed side by side which clog and cause flooding.	Town Board, Highway Department	In Progress. This year the town hired a company to blast granite rock that prevented the roadside ditch at Dippikill from adequately allowing water flow to run along side the road, instead of crossing the road and causing flooding and road washout. Cost is a major factor as to why the bottomless culvert, which would solve the			<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol> <p>1. Include in 2023 HMP</p> <p>2. The most hazardous area in Thurman is Dippikill Road. It is affected every winter. There are two old metal culverts side by side. They rust. The way the river turns there causes debris washing down to get caught up and block the flow. Then the water goes up and over the road causing washouts, closures, detours, trapped residents. The only remedy Thurman can afford is to fix the road in the same manner. This year the Highway Department was able to afford to hire a blasting company to blast the granite rock that prevented an adequate ditch from being dug that would help the water flow away from the road.</p> <p>The Town of Thurman attempted to secure a grant to replace the double culverts with a bottomless culvert, but was not chosen as a grant recipient. The Town had the engineer provide a cost analysis and plans and will try to obtain funding again this year.</p> <p>This road has been the cause of FEMA mitigation in the past. The Halloween Storm did severe damage, but it was also damaged in the May 2011 storm, and just about every year it requires some type of repair.</p> <p>3.</p>





Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
					problem, has not been completed.			
TTH-2	Address drainage and flooding issues throughout the town by improving upon existing stormwater control measures at the following locations: <ul style="list-style-type: none"> <li>Bowen Hill Road at George's Knoll</li> <li>Garnet Lake Road/Little Pond at Henry Wescott Road</li> </ul>	Flood	Flooding will continue to be an ongoing problem for Thurman due to the nature of the roads. Maintaining the ditches, keeping the culverts cleaned out and continuous maintenance is the only way to control this.	Town Board, Highway Department	Ongoing Capability	Cost Level of Protection Damages Avoided; Evidence of Success		1. Discontinue 2. 3. Ongoing capability
TTH-3 (carryover)	The Town of Thurman will coordinate with the County in the development of a county-wide debris management plan.	All Hazards		Town Board, Highway Department	No Progress. The Town is not aware of any County involvement regarding this, other than the annual snow and ice contract which	Cost Level of Protection Damages Avoided; Evidence of Success		1. Discontinue 2. 3. No longer a priority



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
					provides funds for the Town and enables the removal of sand and debris from the ditches along county roads.			<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>
TTH-4	Stormwater and Flood Mitigation at Athol Road – The mitigation recommendation for this site is the installation of new culverts at two locations. The first site would collect runoff and convey it to the established drainage way on the Town property. That would eliminate flooding issues for one of the Town buildings, the public access points and the private residence. The second portion of this project would be to upsize the existing culvert that currently drains the	Flood		Town Board, Highway Department	No Progress	Cost		<ol style="list-style-type: none"> <li>1. There is a culvert to lead water to the drainage ditch which moves the water under the road leading to the salt shed. This reduces the flood risk to the highway garage, road, and private residence. The culvert that conveys water to Athol Rd has not been upsized. This should carryover to the next HMP.</li> <li>2.</li> <li>3.</li> </ol>
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	property and conveys it to Athol Road							
TTH-5	Digitize Town Hall Records – Town Hall has a history of basement flooding. Records should be scanned and maintained electronically to reduce risk of losing records during a flood.	Flood	Town Hall has a history of basement flooding. Records should be scanned and maintained electronically to reduce risk of losing records during a flood.	Town Board, Town Clerk	No Progress	Cost	Level of Protection	1. Include in 2023 HMP 2. The records room used to be on the second floor, which was transformed into needed office space. Records were then moved to the basement on shelves that are 15 inches off the floor. The Town would like to see the records digitized, but do not know how to go about it. Cost will be a factor. One of the actions to resolve this is to apply for a grant through NY state archives. 3.
TTH-7 (carryover)	Review and update local plans to integrate goals, objectives, and activities from this HMP which are not found in existing regulatory documents, as appropriate.	All Hazards	Planning of this nature has not been accomplished by prior town boards. The most important plan should be a financial plan to provide funds for the culvert replacements.	Town Board	Ongoing Capability	Cost	Level of Protection	1. Discontinue 2. 3. Ongoing capability
TTH-8	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or	All Hazards		Town Board	In Progress; A home on Dippikill Road had a FEMA site	Cost	Level of Protection	1. Include in 2023 HMP 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
	acquisition/relocation to protect structures from future damage, with critical facilities and repetitive loss properties as a priority when applicable. Town support shall include direct outreach to flood-prone property owners, specifically critical facility owners/operators and those identified by FEMA as RL/SRL or otherwise identified as flood-prone, and working with interested and voluntary property owners to mitigate their properties based on available funding from FEMA and local (property owner) match availability.  Efforts to mitigate critical facilities shall recognize Federal and State directives for protection to the 500-year flood level				inspection, and the project was completed. However, this should be an continuing item.	Evidence of Success		<ol style="list-style-type: none"> <li>1. Project to be included in 2023 HMP or Discontinue</li> <li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li> <li>3. If discontinue, explain why.</li> </ol>



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
	or "worst case scenario"							
TTH-9 (carryover)	Implement zoning regulations to discourage building new structures in disaster prone areas.	All Hazards	Without a zoning board only the County can accomplish these regulations.	Town Board	No Progress	Cost	Level of Protection	1. Discontinue 2. 3. Without a zoning board only the County can accomplish these regulations.
TTH-6	Educate residents regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earthquakes, and all other natural hazards) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities.	Flood	This is more of an ongoing concern than a problem. Thurman has had an influx of new owners purchasing homes for short term rentals who may not be aware of the dangers that flooding and ice jams can cause.	Town Board, Town Clerk	Ongoing Capability	Cost	Level of Protection	1. Discontinue 2. 3. Ongoing capability
						Damages Avoided; Evidence of Success		



### Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.13-15, the Town of Thurman identified the following mitigation efforts completed since the last HMP:

- None identified

### Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Thurman participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.13-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X		X	X	X	X		X	X
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm	X	X		X	X	X	X			X
Wildfire	X	X		X	X	X	X			X
Infestation	X	X		X	X	X	X			X
Dam Failure	X	X		X	X	X	X			X
Disease Outbreak	X	X		X	X	X	X			X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.13-17).

The table below summarizes the specific mitigation initiatives the Town of Thurman would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



**Table 9.13-17. Proposed Hazard Mitigation Initiatives**

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Thurman-001	Dippikill Road Culverts	1	Flood, Severe Storm	<b>Problem:</b> The most hazardous area in Thurman is Dippikill Road near Parker Cross Road (Patterson Brook). It is affected every winter. There are two old metal culverts side by side. They rust. The way the river turns there causes debris washing down to get caught up and block the flow. Then the water goes up and over the road causing washouts, closures, detours, trapped residents. The only remedy	No	None	Within 5 years	Highway Department	High	Reduction in flooding and flood damages	BRIC, PDM, HMGP, CHIPS, Town budget	High	SIP	SP





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>Thurman can afford is to fix the road in the same manner. This year the Highway Department was able to afford to hire a blasting company to blast the granite rock that prevented an adequate ditch from being dug that would help the water flow away from the road.</p> <p>This road has been the cause of FEMA mitigation in the past. The Halloween Storm did severe damage, but it was also damaged in the May 2011 storm, and just about every year it</p>										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				requires some type of repair. <b>Solution:</b> The Town will replace the double culverts with a bottomless culvert.										
2023-Town of Thurman-002	Stormwater and Flood Mitigation at Athol Road	1	Flood, Severe Storm	<b>Problem:</b> There is a culvert to lead water to the drainage ditch which moves the water under the road leading to the salt shed. This reduces the flood risk to the highway garage, road, and private residence. <b>Solution:</b> The mitigation recommendation for this site is the installation of new culverts at two locations. The first site would collect runoff and	No	None	Within 5 years	Highway Department	High	Reduction in flooding and flood damages	BRIC, PDM, HMGP, CHIPS, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				convey it to the established drainage way on the Town property. That would eliminate flooding issues for one of the Town buildings, the public access points and the private residence. The second portion of this project would be to upsize the existing culvert that currently drains the property and conveys it to Athol Road.										
2023-Town of Thurman-003	Digitize Town Hall Records	4	Flood, Severe Storm, Severe Winter Storm, Wildfire	<b>Problem:</b> The records room used to be on the second floor, which was transformed into needed office space. Records were then moved to the basement	Yes	None	2 years	Town Board, Town Clerk	Medium	Risk of losing records during a flood	Town budget, NY State Archives grant	High	LPR	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				on shelves that are 15 inches off the floor. Town Hall has a history of basement flooding. Records should be scanned and maintained electronically to reduce risk of losing records during a flood. <b>Solution:</b> The Town will scan and electronically maintain current records and move to a digital format for future records.										
2023-Town of Thurman-004	Substantial Damage Procedures	3	Earthquake, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<b>Problem:</b> While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administration	County budget	High	LPR	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				structures, make determinations, and provide for appeals. <b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations. The Town will review current building and zoning requirements to ensure proper alignment and make updates to the building and zoning as needed to address earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazards.										



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Thurman -005	Flood Damage Prevention Ordinance Update	1	Flood	<b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement. <b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement for all construction.	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LPR	PR
2023-Town of Thurman -006	Town Website	2	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation,	<b>Problem:</b> The Town website lacks information on hazards and hazard mitigation. <b>Solution:</b> The Town will establish a new website and	No	None	1 year	Town Board	Low	Increased education and outreach	Town budget	High	EAP	PI



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Dam Failure, Disease Outbreak	include information on hazards of concern and options for mitigation of personal property.										
2023-Town of Thurman -007	FPA Training	1, 4	Flood	<b>Problem:</b> The floodplain administrator requires additional training. <b>Solution:</b> The Town will send the FPA to available training from NYS and FEMA and consider certified floodplain manager training.	No	None	2 years	FPA, Administration	Staff time	Increase floodplain administration capabilities	Town budget	High	LPR	PR
2023-Town of Thurman -008	Emergency Shelter Upgrades	3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm,	<b>Problem:</b> The Town has limited sheltering capabilities. <b>Solution:</b> The Town will upgrade Town Hall for use as a	Yes	None	Within 5 years	Administration	Medium	Sheltering capabilities improved	HMGP, BRIC, PDM, USDA Community Facilities program, Town budget	High	SIP	ES





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Wildfire, Dam Failure	shelter. Necessary upgrades include heating/cooling upgrades and installation of a kitchen.										
2023-Town of Thurman-009	Culvert Upgrades	1	Flood, Severe Storm	<p><b>Problem:</b> There are culverts in town that are very old, rusty metal. Some are two culverts placed side by side which clog and cause flooding.</p> <p><b>Solution:</b> The Town Highway Department will address drainage and flooding issues throughout the Town by installing bottomless culverts, culverts that use plastic instead of metal to prevent rust issues, or other</p>	No	None	Within 5 years	Highway Department	High	Reduction in flooding and flood damages	BRIC, PDM, HMGP, CHIPS, Town budget	High	SIP	SP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				drainage improvements at locations including: •Wolf Pond Road •River Road at Huber Road										

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.



*CRS Category:*

- *Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.*



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.13-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Thurman-001	Dippikill Road Culverts	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Thurman-002	Stormwater and Flood Mitigation at Athol Road	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Thurman-003	Digitize Town Hall Records	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2023-Town of Thurman-004	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Thurman - 005	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Thurman-006	Town Website	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Thurman-007	FPA Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Thurman-008	Emergency Shelter Upgrades	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Thurman-009	Culvert Upgrades	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.13.8 Action Worksheets

The following action worksheets were developed by the Town of Thurman to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Dippikill Road Culverts		
<b>Project Number:</b>	2023-Town of Thurman-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	<p>The most hazardous area in Thurman is Dippikill Road near Parker Cross Road (Patterson Brook). It is affected every winter. There are two old metal culverts side by side. They rust. The way the river turns there causes debris washing down to get caught up and block the flow. Then the water goes up and over the road causing washouts, closures, detours, trapped residents. The only remedy Thurman can afford is to fix the road in the same manner. This year the Highway Department was able to afford to hire a blasting company to blast the granite rock that prevented an adequate ditch from being dug that would help the water flow away from the road.</p> <p>This road has been the cause of FEMA mitigation in the past. The Halloween Storm did severe damage, but it was also damaged in the May 2011 storm, and just about every year it requires some type of repair.</p>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will replace the double culverts with a bottomless culvert.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	10-year event	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, flood damages
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, PDM, HMGP, CHIPS, Town budget
<b>Responsible Organization:</b>	Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove road	\$20,000	Roadway cannot be removed
	Relocate road to another location	\$50,000	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Dippikill Road Culverts	
<b>Project Number:</b>	2023-Town of Thurman-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Project will protect roadways from flooding, culvert damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Highway Department
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	





## SECTION 9.

### 9.14 TOWN OF WARRENSBURG

This section presents the jurisdictional annex for the Town of Warrensburg that provides 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 to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Town participated in the planning process, an assessment of the Town of Warrensburg's risk and vulnerability, the different capabilities used in the Town, and an action plan that will be implemented to achieve a more resilient community.

#### 9.14.1 Hazard Mitigation Planning Team

The Town of Warrensburg identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Code Enforcement Officer. The Code Enforcement Officer represented the community on the Warren County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.14-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name/Title: James S. Hull – Code Enforcement Officer Address: 3797 Main Street, Warrensburg, NY12885 Phone Number: 518-623-9214 Email: <a href="mailto:jim.hull@townofwarrensburg.net">jim.hull@townofwarrensburg.net</a>		Name/Title: Kevin B. Geraghty – Town Supervisor Address: 3797 Main Street, Warrensburg, NY 12885 Phone Number: 518-623-9511 Email: <a href="mailto:kevin.geraghty@townofwarrendburg.net">kevin.geraghty@townofwarrendburg.net</a>	
NFIP Floodplain Administrator			
Name/Title: Patti Corlew Address:3797 Main Street Phone Number: 518-623-9214 Email: <a href="mailto:PattiCorlew@Townofwarrensburg.net">PattiCorlew@Townofwarrensburg.net</a>			
Additional Contributors			
Name/Title: James S. Hull – Code Enforcement Officer Method of Participation: Provided information on capabilities, past events, NFIP administration, building permits, and the status of previous actions. Provided input on hazard rankings and contributed to mitigation strategy.			



### 9.14.2 Municipal Profile

The Town of Warrensburg is centrally located in Warren County. The Town has a total land area of 64.8 square miles of which 63.7 square miles is land and 1.1 square miles is water. It is bordered by the Hudson River on the west. U.S. route 9 passes through the Town.

According to the U.S. Census, the 2020 population for the Town of Warrensburg was 3,959, a 3.3 percent decrease from the 2010 Census. Data from the 2020 U.S. Census indicate that 5.4 percent of the population is 5 years of age or younger and 19.7 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

Additionally, the Town of Warrensburg has the following vulnerability characteristics (FEMA Resilience Analysis and Planning Tool):

- 14.98% of the population does not have a high school diploma
- 20.05% of the population has a disability
- 15.93% of households do not have a vehicle
- 8.24% of the population is living below the poverty level
- 3.45% of the population is unemployed

### 9.14.3 Jurisdictional Capability Assessment and Integration

The Town of Warrensburg performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Warrensburg to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.



## Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town of Warrensburg. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

**Table 9.14-2. Planning, Legal, and Regulatory Capability and Integration**

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>				
<b>Building Code</b>	Yes	New York State Uniform Fire Prevention and Building Code	Local, County	Planning and Zoning, Warren County Fire Prevention and Building Code Enforcement Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Warrensburg has adopted the New York State Uniform Fire Prevention and Building Code to provide for safe new development. The Warren County Fire Prevention and Building Code Enforcement Department is responsible for the enforcement and administration of the New York State Uniform Code and the Energy Conservation Construction Code.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 211- Zoning	Local	Planning and Zoning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance promotes and protects the health, safety and general welfare of the residents of the Town. The Ordinance supports the conservation, protection, development and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the community.				
<b>Subdivision Ordinance</b>	Yes	Chapter 178 – Subdivision Regulations	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Ordinance requires that lands to be subdivided will have adequate safety measures for building purposes including proper drainage, peril from fire, flooding and other menaces to neighboring properties or public health, safety and welfare. Adequate infrastructure for drainage, water supply, sewerage and other necessities are required for any subdivision of land.				
<b>Site Plan Ordinance</b>	Yes	Chapter 211- Zoning, Article IX – Site Plan Review	Local	Planning and Zoning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this Article is to allow for proper integration of uses into the community. All Site Plans have to be properly located and planning with respect to the Towns land use code and Comprehensive Plan, the site plan application must adequately identify its impact and effect on the surrounding areas, and has to accommodate the growth resulting from the proposed use without adverse effect on the Town.				
<b>Stormwater Management Ordinance</b>	No	–	–	–
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	–	–	–



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Real Estate Disclosure</b>	Yes	Property Condition Disclosure Act, NY Code – Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
<b>Growth Management</b>	No	–	–	–
<b>Environmental Protection Ordinance</b>	No	–	–	–
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 116 – Flood Damage Prevention	Federal, State and Local	Planning and Zoning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"><li>A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities</li><li>B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction</li><li>C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.</li><li>D. Control filling, grading, dredging and other development which may increase erosion or flood damages</li><li>E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands</li><li>F. Qualify and maintain for participation in the National Flood Insurance Program.</li></ul> The objective of this Ordinance are to: <ul style="list-style-type: none"><li>A. Protect human life and health</li><li>B. Minimize expenditure of public money for costly flood control projects</li><li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public</li><li>D. Minimize prolonged business interruptions</li><li>E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard</li><li>F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas</li><li>G. Provide that developers are notified that property is in an area of special flood hazard</li><li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li></ul> The Ordinance lacks the state’s 2-foot freeboard requirement.				
<b>Wellhead Protection</b>	No	–	–	–
<b>Emergency Management Ordinance</b>	No	–	–	–



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Climate Change Ordinance</b>	No	-	-	-
<b>Other</b>	No	-	-	-
<b>Planning Documents</b>				
<b>Comprehensive Plan</b>	Yes	Town of Warrensburg Comprehensive Plan and Waterfront Revitalization Strategy, 2012	Local	Planning and Zoning
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Comprehensive Plan focuses on Town-wide economic development and opportunities for tourism, enhancing Hamlet sustainability as the cultural and social pillar of the community, restore, improve and enhance Main Street as the commercial center of the Town, enhance and integrate the Town's waterfront, open space and environmental conservation and protection, diversifying housing types to cater to all demographics, enhance public services, infrastructure, broadband access and community/social interaction, and to maintain, improve, and promote access to existing recreation resources while maintaining and enhancing existing trails and recreation opportunities.</p> <p>The Plan is currently being updated.</p>				
<b>Capital Improvement Plan</b>	No	-	-	-
<b>Disaster Debris Management Plan</b>	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	No	-	-	-
<b>Stormwater Management Plan</b>	Yes	Stormwater Management Plan, 2018; Storm water mapping report, 2013; Echo lake Water Quality Assessment, 2018	Town, County	Planning; Soil & Water Conservation Same
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Reduces runoff into the street, reduces icing, also reduces water flow to the Schroon River</p>				
<b>Open Space Plan</b>	No	-	-	-
<b>Urban Water Management Plan</b>	No	-	-	-
<b>Habitat Conservation Plan</b>	No	-	-	-
<b>Economic Development Plan</b>	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Community Forest Management Plan	No	-	-	-
Transportation Plan	No	-	-	-
Agriculture Plan	No	-	-	-
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	No	-	-	-
Other (for example NYRCR, etc.)	No	-	-	-
<b>Response/Recovery Planning</b>				
Comprehensive Emergency Management Plan	Yes	Warren County Comprehensive Emergency Management Plan (CEMP)	Local, County	Planning and Zoning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The County Comprehensive Emergency Management Plan (CEMP) enhances the County's ability to manage emergency/disaster situations. The Plan outlines a comprehensive approach to risk reduction before a disaster or emergency and identifies short and long-term recovery goals				
Continuity of Operations Plan	No	-	-	-
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Public Health Plan	No	-	-	-
Other	No	-	-	-



## Development and Permitting Capability

The table below summarizes the capabilities of the Town of Warrensburg to oversee and track development.

**Table 9.14-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"><li>If you issue development permits, what department is responsible?</li></ul>	N/A	Warren County Building codes does all inspections, Planning & Zoning
<ul style="list-style-type: none"><li>If you do not issue development permits, what is your process for tracking new development?</li></ul>	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	When issued they are reviewed for flood zone
Do you have a buildable land inventory?	No	-
<ul style="list-style-type: none"><li>If you have a buildable land inventory, please describe</li></ul>	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	Roughly 60 percent of the Town is built out.

## Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Warrensburg and their current responsibilities that contribute to hazard mitigation.

**Table 9.14-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Planning Board is responsible for reviewing residential and commercial land use development permits, site plan review and approval, major and minor subdivision review and approval.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals is responsible for reviewing and approving all area variance applications and use variance applications
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The Economic Development Committee
Public Works/Highway Department	Yes	Highway Department
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	Yes	Warrensburg EMS and Volunteer Fire Department
Warning Systems / Services	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
(mass notification system, outdoor warning signals, etc.)		
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Warrensburg Volunteer Fire Department
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Cedarwood Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Cedarwood Engineer
Planners or engineers with an understanding of natural hazards	Yes	Cedarwood Engineer
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Zoning Administrator, GIS
Environmental scientist familiar with natural hazards	Yes	Cedarwood Engineering
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	Bookkeeper/Grant Writer Staff
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

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

**Table 9.14-5. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	No
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas or electric service	Yes – Sewer/Water
Impact fees for homebuyers or developers of new development/homes	No



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Stormwater utility fee	No
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

## Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Warrensburg.

**Table 9.14-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none"><li>If yes, please describe.</li></ul>	No	-

## Community Classifications

The table below summarizes classifications for community programs available to the Town of Warrensburg.

**Table 9.14-7. Community Classifications**

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



New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	Warren County is certified	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

## Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:

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

**Table 9.14-8. Adaptive Capacity**

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Wildfire	Moderate
Infestation	Moderate
Dam Failure	Moderate
Disease Outbreak	Moderate

### 9.14.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Warrensburg.



Table 9.14-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Warrensburg	9	8	\$11,649	0	0	0

Source: FEMA 2023

Notes: Claims and payment data per HUDEX report accessed 1/26/2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Warrensburg.

Table 9.14-10. NFIP Summary

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Area of 52 River Street (poor drainage and road elevation) Warren Street and Swan Street Road flooding from storm runoff
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	No list is maintained.  None as of this date.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	FEMA is updating the floodplain maps
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	Actual Visit of the area affected  None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigation properties, how were the projects funded?</li></ul>	One new construction at 47 River Street.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	No. FEMA Maps are outdated. Show flood hazards where none exist
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Zoning Administrator
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No



NFIP Topic	Comments
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"><li>If so, what type of assistance/training is needed?</li></ul>	Additional training and resources would be a benefit to the administrator
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town performs floodplain management activities including identification of structures within the floodplain. While local floodplain management is the responsibility of the Town, the Warren County Fire Prevention and Building Codes Enforcement Department is responsible for building code reviews in compliance with the NYS Uniform Code within the Town. Upon receipt of a signed zoning compliance certificate, the county performs the code.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Review of the proposed project Plans
What are the barriers to running an effective NFIP program in the community, if any?	Staffing shortage
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"><li>If so, state the violations.</li></ul>	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAV: May 17, 2021
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"><li>What is the date that your flood damage prevention ordinance was last amended?</li></ul>	Chapter 116 – Flood Damage Prevention
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"><li>If exceeds, in what ways?</li></ul>	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, planning board would take flood locations into consideration
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not at this time

### 9.14.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Table 9.14-11 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.14-11. Recent and Expected Future Development**

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	3	N/A	3	N/A	5	N/A	6	N/A	6	N/A	11	N/A
Multi-Family	1	N/A	1	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	1	N/A	2	N/A	6	N/A	0	N/A	2	N/A	4	N/A
Total New Construction Permits Issued	5	N/A	6	N/A	11	N/A	6	N/A	8	N/A	15	N/A
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development					
Recent Major Development and Infrastructure from 2017 to Present												
Krystal Chrysler	Commercial	1	3940 Main Street		None		Complete					
Dollar General	Commercial	1	3760 Main Street		None		Complete					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
None anticipated.												

SFHA Special Flood Hazard Area (1% flood event)

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

Note: Information on permits within the SFHA was unavailable for this planning process.

## 9.14.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) provide detailed summaries for the Town of Warrensburg's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Warrensburg has significant exposure are provided. The source of the regulatory floodplain information is from Warren County georeferenced FIRM maps dated from the 1980s and 1990s.





Figure 9.14-1. Town of Warrensburg Flood Hazard Area Extent and Location Map

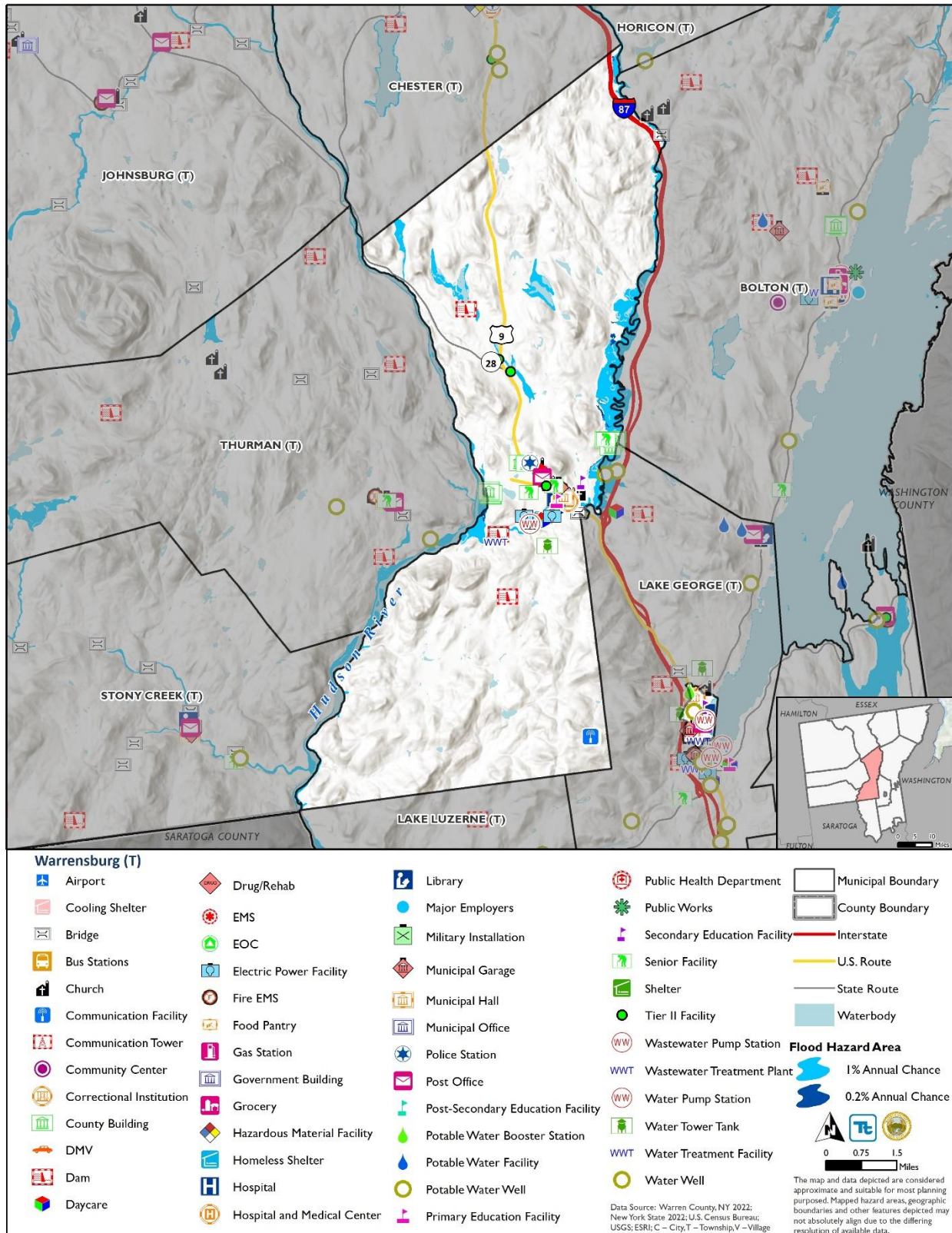






Figure 9.14-2. Town of Warrensburg Earthquake (Soil Class) Hazard Area Extent and Location Map

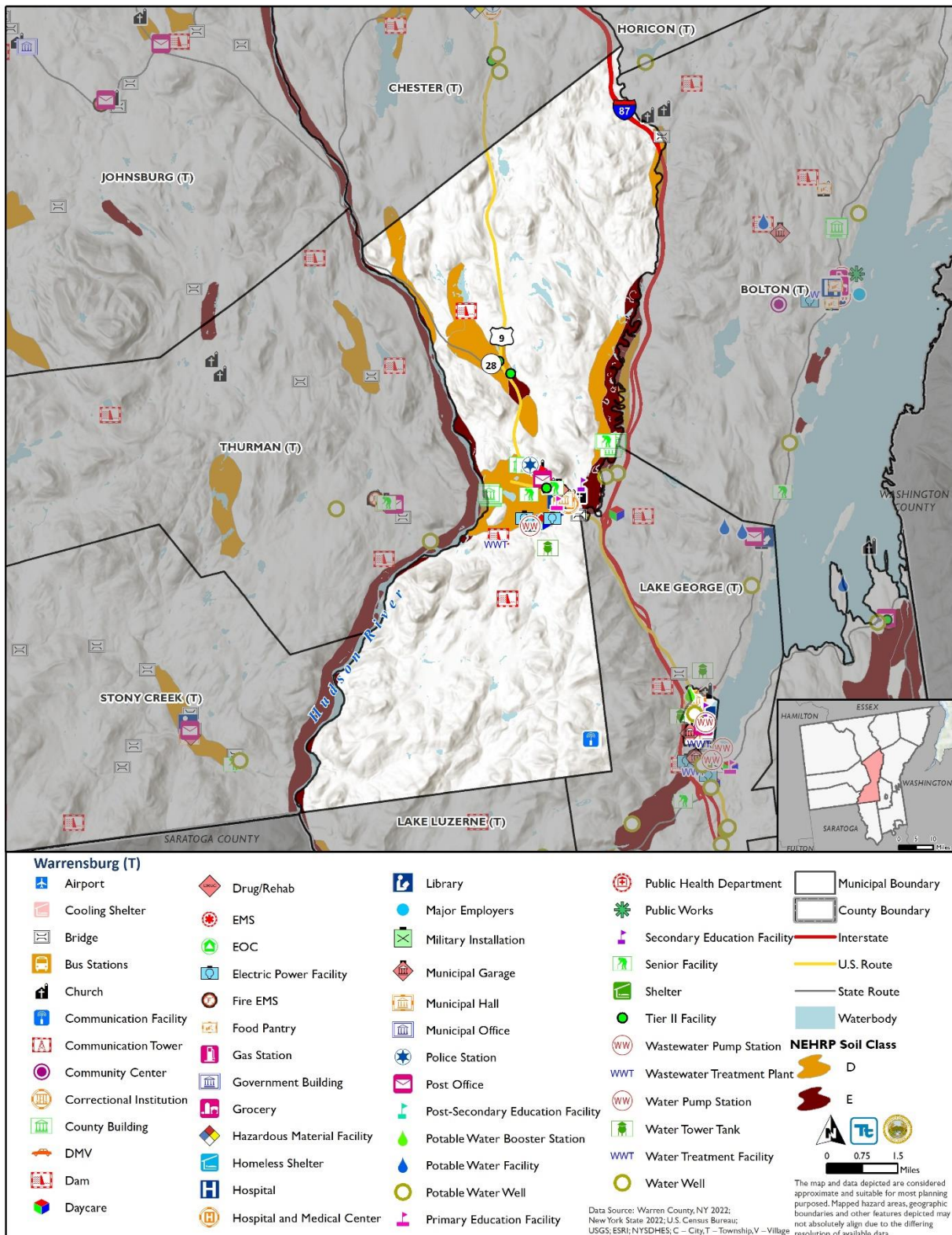
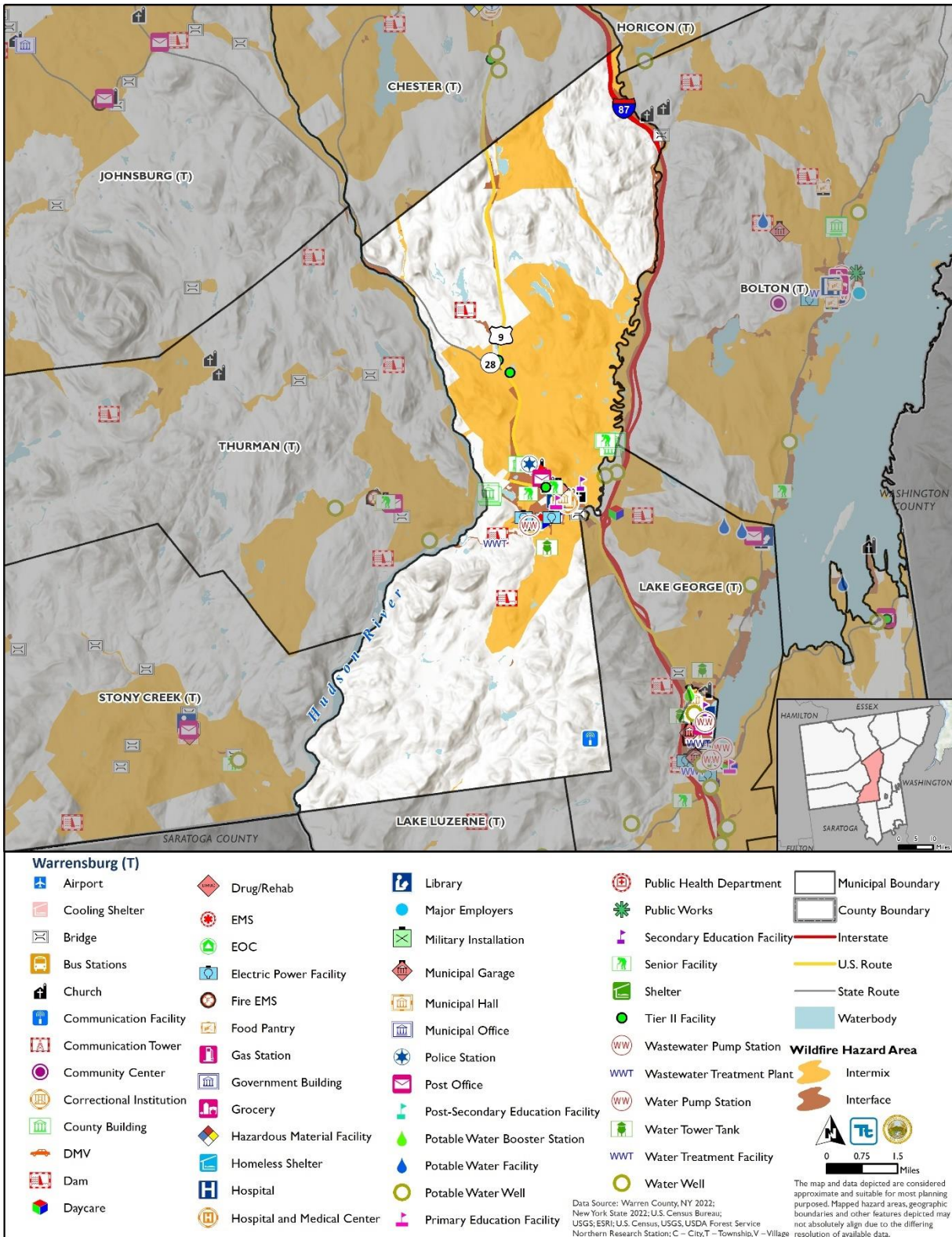




Figure 9.14 3. Town of Warrensburg Wildfire Hazard Area Extent and Location Map







## Hazard Event History

Warren County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The Town of Warrensburg's history of federally-declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.14-12 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

**Table 9.14-12. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 31 – November 1, 2019	Severe Storms, Straight-line winds, Flooding (DR-4472) "Halloween Storm"	Yes	A strengthening low pressure system moving from Ohio to Lake Ontario drew anomalous warmth and moisture northward on Halloween, with temperatures surging into the 60s and 70s over eastern New York and western New England. Showers across the southern Adirondacks and Mohawk Valley became steadier and heavier during the evening ahead of a strong cold front as the low continued to strengthen. Strong winds aloft mixed down to the surface as an intense line of showers developed along the front, resulting in sporadic wind damage and scattered power outages over eastern New York.	A large swath of rainfall totaling 2–5 inches, with isolated areas as high as 7 inches, occurred over the Mohawk Valley and southern Adirondacks, resulting in reports of flash flooding. The runoff caused rapid rises on area creeks and streams, with river gauges reaching record levels along the Mohawk River at Little Falls, the West Canada Creek at Hinckley and Kast Bridge, and the Sacandaga River at Hope.
January 20, 2020	Covid-19 (EM-3434)	Yes	As of November 2022, Warren County has experienced over 20,000 positive cases of Covid-19	The Town was subject to closures and masking/social distancing requirements.
2020	Ice Jams	No	Ice jams occurred on the Hudson River.	Ice jam flooding impacted the Cronins Golf Course and the Fish Hatchery Building.

Notes:

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



## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Warrensburg's risk assessment results and data used to determine the hazard ranking.

### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Warrensburg. The Town of Warrensburg reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town indicated the following:

- The Town agreed with the calculated hazard rankings.

**Table 9.14-13. Hazard Ranking Input**

Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	Infestation
Medium	Medium	Low	High	High	High	Medium

Dam Failure	Disease Outbreak
Medium	Low

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

### Critical Facilities

NYSDEC Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a SFHA unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, New York State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance



flood event or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

**Table 9.14-14. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
County Home	Bridge	X	X	2023-Town of Warrensburg-010	County owned, replaced recently
Judd	Bridge	X	X	2023-Town of Warrensburg-010	County owned, replaced recently
Milton	Bridge	X	X	2023-Town of Warrensburg-010	County owned, replaced recently
Bert Murray	Bridge	X	X	2023-Town of Warrensburg-010	County owned, replaced recently
Pack Forest Lake Dam	Dam	X	X	2023-Town of Warrensburg-010	Owned by Syracuse University. Managed by SUNY ESF.
Fairgrounds Facilities	County Building	X	X	2023-Town of Warrensburg-010	County owned buildings. One facility at higher risk elevated with sump pumps. New dam was placed on the Schroon River to control flooding.
Water Well, Schroon River Road	Water Well	X	X	-	Designed to withstand flooding

Source: Warren County 2022

## Identified Issues

After review of the Town of Warrensburg's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town of Warrensburg identified the following vulnerabilities within their community:

- Critical facilities require backup power to maintain continuity of operations. Town Hall lacks a backup power source.
- The Town is interested in investigating potential locations to install a fourth public water well in the Town of Warrensburg.
- The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.
- The floodplain administrator requires additional training.



- Integration of hazard mitigation concepts is needed to support the Town of Warrensburg Comprehensive Plan and Waterfront Revitalization Strategy update. The Plan was originally written in 2012.
- The Middleton Bridge is located in the Towns of Bolton and Warrensburg and crosses the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed.\*
- Current floodplain mapping is outdated and has incorrectly mapped floodplains.
- River Street, Warren Street, and Swan Street experience stormwater flooding due to incorrectly graded roadway surfaces.
- While major events that result in substantial damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals.
- Several critical facilities located within the Town's floodplain are not owned by the Town.

\*This issue was identified as a specific area of concern based on resident response to the Warren County Hazard Mitigation Citizen survey.

### 9.14.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



**Table 9.14-15. Status of Previous Mitigation Actions**

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
						Cost	Level of Protection	
WT-1 (carryover)	Educate residents and contractors regarding steps to be taken to decrease the impact of natural hazards (including ice storms, wild/forest fires, severe storms, tornado, earthquakes, flooding, and all other natural hazards) by developing, enhancing, and implementing education programs, brochures, school presentations informing groups about ways to reduce risk, and other outreach activities.	All Hazards		Town Board; Superintendent of school districts; County Office of Emergency Services; NYSDEC; Highway Dept	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
						Level of Protection		
						Damages Avoided; Evidence of Success		
WT-2	Obtain funding, purchase, and install generators for municipally-owned critical facilities including: Town Hall	All Hazards		Town Board, County OES	In Progress; a new addition to the Fire House was completed and the	Cost		1. Include in 2023 HMP 2. Town Hall requires completion. The Firehouse is a designated shelter for the Town. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		





## SECTION 9.14. Town of Warrensburg

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
	High School				entire building, old and new are on a backup generator.			1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WT-3 (carryover)	Maintain a current inventory of at-risk buildings and infrastructure and continually update inventory of at-risk structures in each jurisdiction.	All Hazards		Town Board, Planning Department	No Progress	Cost		1. Discontinue 2. 3. No longer a priority
						Level of Protection		
						Damages Avoided; Evidence of Success		
WT-4 (carryover)	Provide annual education and training for local Floodplain Administrator to ensure code enforcement and proper inspections.	Flood		Town Board	No Progress	Cost		1. Discontinue 2. 3. Responsibilities of NFIP administration are with Warren County
						Level of Protection		
						Damages Avoided; Evidence of Success		
WT-5	Culvert improvement projects. Upsize Cross Road culvert. Roadway elevation and culvert improvement at Swan Street.	Severe Storm, Flood		Town Board, Highway Department	Complete; Culverts have been inspected by the Highway Supervisor Ed Pennock. New culverts to prevent washouts have been installed at	Cost		1. Discontinue 2. 3. Complete
						Level of Protection		
						Damages Avoided; Evidence of Success		



## SECTION 9.14. Town of Warrensburg

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, No Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		1. Project to be included in 2023 HMP or Discontinue 2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
					the following locations. (A) Viele Pond Road (B) Library Ave Extension (C) Alden Ave. (D) Rock Ave. ( Pucker Street) Drop inlets and catch basins were cleaned, leaves were removed from along Town Highways, including brush.			
WT-6	Investigate potential locations and install a fourth public water well in the Town of Warrensburg.	All Hazards		Town Board	In Progress; The Town has and is working with the Town Engineering firm Cedar wood Engineering to establish, new well sites. A new water Main	Cost		1. Include in 2023 HMP 2. 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
					is currently being installed on Alden Ave form the water supply tank on Alden Ave. This project is under construction and not complete to date. A new water supply line is being installed across the Rt. 9 Bridge coming into Town to replace the old one. That project is under construction and not complete. The Town Sewer plant will in the spring of 2023 go thru a cleaning of the sludge pits. That			<ol style="list-style-type: none"><li>1. Project to be included in 2023 HMP or Discontinue</li><li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li><li>3. If discontinue, explain why.</li></ol>



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Next Steps		
						Evaluation of Success (if project status is complete)		
					project is on hold due to weather, looking at spring completion.			<ol style="list-style-type: none"><li>1. Project to be included in 2023 HMP or Discontinue</li><li>2. If including action in the 2023 HMP, revise/reword to be more specific (as appropriate).</li><li>3. If discontinue, explain why.</li></ol>



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.14-15, the Town of Warrensburg identified the following mitigation efforts completed since the last HMP:

- None identified

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Warrensburg participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide-range of activities and mitigation measures selected.

**Table 9.14-16. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Earthquake	X	X			X	X				X
Extreme Temperature	X	X			X	X				X
Flood	X	X		X	X	X	X		X	X
Severe Storm	X	X			X	X			X	X
Severe Winter Storm	X	X			X	X				X
Wildfire	X	X			X	X				X
Infestation	X	X			X	X				X
Dam Failure	X	X			X	X				X
Disease Outbreak	X	X			X	X				X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.14-17).

The table below summarizes the specific mitigation initiatives the Town of Warrensburg would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.14-17. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Warrensburg-001	Town Hall Backup Power	1, 3	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Dam Failure	<p><b>Problem:</b> Critical facilities require backup power to maintain continuity of operations. Town Hall lacks a backup power source.</p> <p><b>Solution:</b> The Engineer will research what size generator is needed to power each facility. The Town will then purchase and install the selected generator and necessary electrical components</p>	Yes	None	Within 5 years	Engineer, Highway Department	High	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.	HMGP, PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	ES



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				to supply backup power to each facility. The Highway Department will be responsible for maintenance and testing of each generator following installation.										
2023-Town of Warrensburg-002	Public Water Well	1	Wildfire	<b>Problem:</b> The Town is interested in investigating potential locations to install a fourth public water well in the Town of Warrensburg. <b>Solution:</b> The Town will continue working with the Town Engineering firm Cedar	Yes	None	Within 5 years	Town Engineering	High	Increased protection from drought	BRIC, Town budget	High	SIP	PP





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				wood Engineering to establish new well sites. Once identified, the Town will install the well.										
2023-Town of Warrensburg-003	Flood Damage Prevention Ordinance Update	1	Flood	<p><b>Problem:</b> The Town's flood damage prevention ordinance requires update to meet state freeboard requirements. The current ordinance does not have a freeboard requirement.</p> <p><b>Solution:</b> The Town will update and adopt the ordinance to include a 2 feet freeboard requirement</p>	No	None	1 year	FPA, Town Board	Staff time	Meet state standards, increased building requirements	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2023-Town of Warrensburg-004	Floodplain Administration or Training	4	Flood	<p><b>Problem:</b> The floodplain administrator requires additional training.</p> <p><b>Solution:</b> The Town will send the FPA to available training from NYS and FEMA and consider certified floodplain manager training.</p>	No	None	2 years	FPA, Administration	Staff time	Increase floodplain administration capabilities	Town budget	High	LP R	PR
2023-Town of Warrensburg-005	Hazard Mitigation Integration	4	Earthquake, Extreme Temperature, Flood, Severe Storm, Severe Winter Storm, Wildfire, Infestation, Dam Failure,	<b>Problem:</b> Integration of hazard mitigation concepts is needed to support the Town of Warrensburg Comprehensive Plan and Waterfront Revitalization Strategy	No	None	2 years	Town Board, Planning Department	Low	Increased integration and planning consistency	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Disease Outbreak	update. The Plan was originally written in 2012. <b>Solution:</b> The Town will update the Town of Warrensburg Comprehensive Plan and Waterfront Revitalization Strategy using information from this hazard mitigation plan update to inform hazard areas and hazard mitigation techniques.										
2023-Town of Warrensburg-006	Middleton Bridge Replacement	1	Earthquake, Extreme Temperature, Flood, Severe Storm	<b>Problem:</b> The Middleton Bridge is located in the Towns of Bolton and Warrensburg and crosses	No	Will require permitting	Within 5 years	WCDPW, A/GFTC, Town of Warrensburg Administration, Town of Bolton	High	Vital transportation route reestablished	BRIC, PDM, HMGP, County budget	High	SIP	PP



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>the Schroon River. The bridge is failing and has been closed. A replacement bridge is needed.</p> <p><b>Solution:</b> The Town will support the County's efforts to replace the bridge and provide data and information as necessary.</p>										
2023-Town of Warrensburg-007	Support Updated FIRMs	1, 4	Flood	<p><b>Problem:</b> Current floodplain mapping is outdated and has incorrectly mapped floodplains.</p> <p><b>Solution:</b> The Town will assist FEMA during</p>	No	None	Within 5 years	FPA	Staff time	Improved floodplain mapping	Town budget	High	LP R	PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				remapping and provide input and data where possible.										
2023-Town of Warrensburg-008	Stormwater Upgrades	1	Flood, Severe Storm	<b>Problem:</b> River Street, Warren Street, and Swan Street experience stormwater flooding due to incorrectly graded roadway surfaces. <b>Solution:</b> The Highway Department will regrade the roadways so stormwater is directed towards current drop inlet locations.	No	None	Within 5 years	Highway Department	High	Improved stormwater management, reduction in flooding	HMGP, Town budget	High	SIP	SP
2023-Town of Warrensburg-009	Substantial Damage Procedures	3	Earthquake, Flood, Severe Storm, Severe	<b>Problem:</b> While major events that result in substantial	No	None	Within 5 years	FPA	Staff time	Meet NFIP requirements, improved floodplain administrati	Municipal budget	High	LP R	PP, PR



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Winter Storm, Wildfire, Dam Failure	damage of structures are rare, official procedures need to be in place to inspect structures, make determinations, and provide for appeals. <b>Solution:</b> The Town will develop official procedures for Substantial Damage and Substantial Improvement determinations. The Town will review current building and zoning requirements to ensure proper alignment						on; improved recovery efforts				



Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				and make updates to the building and zoning as needed to address earthquake, flood, severe storm, severe winter storm, wildfire, and dam failure hazards.										
2023-Town of Warrensburg-010	Critical Facility Outreach	4	Flood	<b>Problem:</b> Several critical facilities located within the Town's floodplain are not owned by the Town. <b>Solution:</b> The Town will conduct outreach to the facility managers to discuss flood exposure and potential mitigation measures	Yes 💧	None	Within 6 months	FPA	Staff time	Facility managers aware of flood risk and potential mitigation options	Town budget	High	EAP	PI





Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				that could be considered.										

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
BRIC	Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes  Critical Facility located in 1% floodplain

Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

CRS Category:

- Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.



- *Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR)—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.*



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

**Table 9.14-18. Summary of Prioritization of Actions**

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Warrensburg - 001	Town Hall Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Warrensburg - 002	Public Water Well	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2023-Town of Warrensburg - 003	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2023-Town of Warrensburg - 004	Floodplain Administrator Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2023-Town of Warrensburg - 005	Hazard Mitigation Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2023-Town of Warrensburg - 006	Middleton Bridge Replacement	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2023-Town of Warrensburg - 007	Support Updated FIRMs	0	1	1	1	1	1	1	1	1	1	0	0	1	1	11	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-Town of Warrensburg-008	Stormwater Upgrades	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2023-Town of Warrensburg-009	Substantial Damage Procedures	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2023-Town of Warrensburg-010	Critical Facility Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



### 9.14.8 Action Worksheets

The following action worksheets were developed by the Town of Warrensburg to aid in the submittal of grant applications to support the funding of high priority proposed actions.



Action Worksheet			
<b>Project Name:</b>	Town Hall Backup Power		
<b>Project Number:</b>	2023-Town of Warrensburg-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	Critical facilities require backup power to maintain continuity of operations. Town Hall lacks a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power each facility. The Town will then purchase and install the selected generator and necessary electrical components to supply backup power to each facility. The Highway Department will be responsible for maintenance and testing of each generator following installation.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the 100-year floodplain?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect public health and safety, and ensure continued operation of critical facility and essential functions during power outages.
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Highway Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Town Hall Backup Power	
<b>Project Number:</b>	2023-Town of Warrensburg-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Town Hall
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Highway Department
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	