



Tompkins County Hazard Mitigation Plan

2021 Update



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SECTION 8. PLANNING PARTNERSHIP

This section provides a description of the Tompkins 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 Tompkins County HMP update, a Planning Partnership was formed that was made up of a Steering Committee and separate Planning Committee that included all municipal representatives to leverage resources and to meet requirements for the federal Disaster Mitigation Action of 2000 (DMA) for as many eligible governments as possible. 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 by which they were created, are contained in this Volume 2 of this HMP.

8.1.1 Initial Solicitation and Letters of Intent

Tompkins County solicited the participation of all municipalities in the county at the commencement of this project. All municipalities interested signed a *Letter of Intent* (LOIs) or a resolution committing their participation and resources to the development of the Tompkins County HMP update (Appendix B). Table 8-1 lists the jurisdictions that elected to participate in the update process and have met the minimum requirements of participation as established by the County and the Steering Committee. Tompkins County and 16 municipalities participated in the HMP update. Note: all Tompkins Communities submitted LOIs and participated in the plan update process.



Table 8-1. Participating Jurisdictions in Tompkins County

Jurisdictions	
Tompkins County	
Caroline (T)	Groton (V)
Cayuga Heights (V)	Ithaca (T)
Danby (C)	Ithaca (C)
Dryden (T)	Lansing (T)
Dryden (V)	Lansing (V)
Enfield (T)	Newfield (T)
Freeville (T)	Trumansburg (V)
Groton (T)	Ulysses (T)

8.2 Planning Partner Responsibilities

The Planning Partnership agreed to the following list of expectations:

- Review 2014 HMP goals and establish HMP update mission statement, 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 (Steering and Planning Committees) is intended to remain active beyond the regulatory update to support plan maintenance. Regarding the composition of the Planning Partnership, it is recognized that individual commitments 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 2017 New York State Hazard Mitigation Planning Standards, jurisdictional annexes provide a unique, stand-alone guide to mitigation planning for each jurisdiction. The Tompkins County HMP Update is organized so that there is an annex for Tompkins County and for every jurisdiction within the County's borders



(16 separate annexes). Section 9 (Jurisdictional Annexes) includes an annex for every jurisdiction in Tompkins County, including those that did not fully participate.

8.2.1.1 Annex Development

In order to facilitate update of the County and jurisdictional annexes, data from the 2014 Tompkins County HMP annexes was transferred to the 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 2014 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 July 13, 2020, to provide an overview of the planning process. Subsequently, as a result of the active pandemic, the consultant convened a series of virtual individual workshops and socially distanced in-person meetings to assist each municipality in updating, integrating and completing annex input. During the first round of meetings the consultant guided the municipal representatives through the annex document, focusing on growth and development trends; planning, legal, fiscal and regulatory capabilities; education and outreach capabilities; NFIP information and capabilities; areas of integration; and updating the 2014 mitigation strategy. The consultant guided the municipal representatives through the annex document and updated information jointly where appropriate. Following the meeting, the municipalities were tasked with providing information that could not be determined during the call. The second round of meetings focused on the relative risk ranking of the hazards of concern including the community's adaptive capacity and included a follow-up on items flagged in the first meeting. In addition to the meetings, the consultant reviewed planning mechanisms including plans, regulations, and codes to identify gaps or mitigation actions as well as integration opportunities with the HMP.

A mitigation workshop was then held on October 22, 2020 to provide an overview of developing a strong mitigation strategy. In preparation for this workshop the consultant provided a consolidated list of problem areas/vulnerabilities identified during the planning process and feedback from the citizen survey to support the development of relevant projects to form the mitigation strategy. Finally, the last round of individual support meetings addressed the development of the updated mitigation strategy as well the clarification of sheltering, housing and evacuation route information available in each municipality.

Hazard Ranking Exercise

The risk assessment and risk ranking for each jurisdiction was presented on September 16, 2020, in a meeting including discussion of the overall risk assessment for the hazards of concern. 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 Planning 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 provided a mitigation strategy workshop to Tompkins County and its jurisdictions on October 22, 2020. At this meeting, NYS DHSES discussed the importance of developing mitigation actions and worked in small groups to help each jurisdiction identify mitigation actions and develop action worksheets. 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. The NYS DHSES action worksheet template and instructions are provided in Appendix G (Plan Review Tools).

Municipal Support Meetings

In addition to the municipal kick-off meeting, multiple municipal support meetings were held virtually throughout October and November. At these support meetings, the County and consultant worked one-on-one with the municipal partners to complete their jurisdictional annex. Each section of the annex was thoroughly 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 facility lifelines 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 facility lifelines 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.



8.2.1.2 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 an active *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 Planning Team: Identifies the hazard mitigation planning primary and alternate(s) contacts, as identified by the jurisdiction.

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: Growth and Development Trends: Provides a history of development permits during the performance period of the previous plan to provide an understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas.

Section 9.X.4: Capability Assessment: 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.



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.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms: Identifies 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.5: 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.

Section 9.X.6: Hazard Ranking and Jurisdiction-Specific Vulnerabilities: 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).

Critical Facility Lifelines 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).

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.

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 sub-section.

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).

Section 9.X.8: Proposed Action Types: This indicates the range of proposed mitigation action categories.

Section 9.X.9: Staff and Local Stakeholder Involvement in Annex Development: Provides details on which departments were involved throughout the development of the jurisdictional annex. Plans developed with the participation of the widest range of departments, stakeholders, and persons familiar with the jurisdiction should be involved in the development of the jurisdictional annexes. Further detail is provided in Section 3 (Planning Process), Section 9 (Jurisdictional Annexes), and Appendix B (Participation Matrix).

Section 9.X.10: Hazard Area Extent and Location Map: Includes a map (or series of maps) illustrating identified hazard zones, critical facilities, and areas of NFIP Repetitive Loss/Severe Repetitive Loss (RL/SRL) for each facility. Further, these maps show areas of known or anticipated future development, as available and provided by the jurisdiction.

Action Worksheets: Provides each municipality with a more developed starting point for project implementation should funding become available. Following NYS DHSES HMP Standards Guide, each municipality developed a minimum of two action worksheets. Workshops and additional meetings (in person, by email, or by teleconference) to complete the jurisdictional annexes were held with the Steering and Planning Committees throughout the planning process. In summary, all participating communities and the County completed the planning partner expectations and annex-preparation process. Details regarding these meetings are described further in Sections 3 (Planning Process) and 6 (Mitigation Strategy). Completed jurisdictional annexes are provided in Section 9 (Jurisdictional Annexes).

8.2.2 Coverage Under the Plan

Of the planning partners identified during the planning process, all 16 fully met the participation requirements. Planning partners met principal requirements which included 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 Date	Attended Workshops and/or Meetings?	Provided Update on Past Projects	Submitted Mitigation Actions for Current Plan	Seeking Approval for Adoption (meets requirements)
Tomokins County	-	X	X	X	X
Caroline (T)	3/11/2020	X	X	X	X
Cayuga Heights (V)	5/4/2020	X	X	X	X
Danby (C)	1/31/2020	X	X	X	X
Dryden (T)	2/4/2020	X	X	X	X
Dryden (V)	3/13/2020	X	X	X	X
Enfield (T)	2/14/2020	X	X	X	X
Freeville (T)	3/9/2020	X	X	X	X
Groton (T)	2/19/2020	X	X	X	X
Groton (V)	2/24/2020	X	X	X	X
Ithaca (T)	2/7/2020	X	X	X	X
Ithaca (C)	2/5/2020	X	X	X	X
Lansing (T)	2/5/2020	X	X	X	X
Lansing (V)	5/13/2020	X	X	X	X
Newfield (T)	2/21/2020	X	X	X	X
Trumansburg (V)	2/19/2020	X	X	X	X
Ulysses (T)	2/11/2020	X	X	X	X



9.1 Tompkins County

This section presents the jurisdictional annex for Tompkins County. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of Tompkins County and who in the County participated in the planning process; an assessment of Tompkins County’s risk and vulnerability; the different capabilities utilized 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 following individuals have been identified as the Tompkins County’s hazard mitigation plan primary and alternate points of contact.

Table 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Scott D. Doyle, AICP, Associate Planner Address: Daniel D. Tompkins Bldg., 121 E. Court St., Ithaca Phone Number: 607-274-5560 Email: sdoyle@tompkins-co.org	Name/Title: Katie Borgella, AICP, Commissioner of Planning & Sustainability Address: Daniel D. Tompkins Bldg., 121 E. Court St., Ithaca Phone Number: 607-274-5560 Email: kborgella@tompkins-co.org

9.1.2 Municipal Profile

Please refer to Section 4, Volume I of this Plan for details on Tompkins County’s population, location, climate, history, growth and development.

9.1.3 Growth/Development Trends

Understanding how past, current, and projected development patterns are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. The jurisdictional annexes for each municipality summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development. New York State clearly places land use authority in the hands of its towns, villages, and cities. The State also specifically recognizes that intermunicipal planning is needed to cooperatively address regional issues. There are several ways the County is involved in regional development issues including: providing technical assistance to municipalities in establishing land use



policies and regulations that support development where there is existing community infrastructure and facilities, working with municipalities to identify potential infill areas for energy efficient housing and commercial development as well as review development proposals according to General Municipal Law §239 -l, -m and -n. Several hundred local development proposals and laws are reviewed annually by the Tompkins County Department of Planning & Sustainability for countywide impact. A variety of impacts of the proposal are assessed including impacts of the project on local transportation systems, floodplains, and mitigation plan priorities.

9.1.4 Capability Assessment

Tompkins County performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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.
- The County’s adaptive capacity for the impacts of climate change.
- Classification under various community mitigation programs.

Areas where mitigation is currently integrated are summarized in this Capability Assessment. Refer to Appendix I for the results of the planning/policy document reviews.

9.1.4.1 Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to Tompkins County and where hazard mitigation has been integrated.

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

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	No	-	Local and State	Local Code Department	Yes
Comment: <i>New York State clearly places land use authority in the hands of its towns, villages, and cities. NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of</i>					



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<p>the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017). Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</p>					
Zoning Code	No	-	Performed at the local level	Local Zoning Board of Adjustment	No
<p>Comment: New York State clearly places land use authority in the hands of its towns, villages, and cities. Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"¹¹ or "in accordance with a comprehensive plan."¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. In Tompkins County, the zoning code is regulated at local level.</p>					
Subdivision Regulations	No	-	Performed at the local level	Local Zoning Board of Adjustment	No
<p>Comment: New York State clearly places land use authority in the hands of its towns, villages, and cities. Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p>					
Stormwater Management Regulations	No	-	Performed at the local level	-	No
<p>Comment: New York State clearly places land use authority in the hands of its towns, villages, and cities. Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	In Development	N/A	Local	Tompkins County Department of Planning & Sustainability	No
<p>Comment: *Funding from the New York State Department of State is being used in tandem with this hazard mitigation plan update and will result in a countywide resiliency and recovery plan.*</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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>					



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Growth Management Regulation	No	No	Performed at the local level	-	No
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.					
Site Plan Review	No	No	Local	-	No
Comment: New York State clearly places land use authority in the hands of its towns, villages, and cities.					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	NYSDEC	Yes
Comment: New York State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019. Tompkins County additionally has a County SEQR policy for how the County ensures adheres to State law.					
Flood Damage Prevention Law	No	-	State and Local	Performed at the local level	Yes – municipal level
Comment: New York State clearly places land use authority in the hands of its towns, villages, and cities.					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	-	Tompkins County	All Departments – supported by TCSWCD	Yes
Comment:					
Emergency Management	Yes	County CEMP	County	Department of Emergency Response	Yes
Comment: To establish procedures for County government and affiliated emergency responders to follow in the event of a disaster, as defined by Article II-B of the New York State Executive Law and including, but not limited to, flood, fire, storm, acts of terrorism, earthquake, large-scale hazardous materials incidents, health epidemics, etc...; and to direct the development of a Comprehensive Emergency Management Plan (CEMP). Policy Number: 01-19. * Tompkins County is the process of updating its CEMP and will align with the HMP as relevant.					
Climate Adaptation	In Part	Tompkins County Comprehensive Plan, 2015	County	Planning and Sustainability Office	No
Comment: The 2015 Comprehensive Plan adds climate adaptation, a completely new element, to the Plan. It also restructures the strong communities section by addressing healthy communities, adds two overarching principles of fiscal responsibility and sustainability, and updates policy statements to make them more direct. Specific action items to be initiated by County government within two years are identified in each chapter.*					
Disaster Recovery Ordinance	No	-	-	-	No
Comment: As a part of the Resiliency and Recovery Plan the County will consider appropriateness of County/municipal adoption of a recovery ordinance.					
Planning Documents					
Comprehensive Plan	Yes	Updated 2015	County	Tompkins County Department of Planning & Sustainability	No
Comment: One of the duties of the Department of Planning and Sustainability is to prepare a comprehensive plan for the development of the County. On March 3, 2015, the Tompkins County Legislature adopted the 2015 Tompkins County Comprehensive Plan. In 2019, the Department completed the five-year review of the 2015 Comprehensive Plan. As a					



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<p>result of that review, the Legislature adopted a new list of Action Items to continue implementing the 2015 Comprehensive Plan.</p> <p>The Comprehensive Plan presents a vision for the future of the community based on a set of principles that reflect the values of the community as expressed by the County Legislature they have elected. The principles include three that are overarching and reflected throughout the Comprehensive Plan.</p> <p>The 2015 Comprehensive Plan includes policies that align with the HMP, including the preservation of natural systems and managing stormwater and flooding. The plan includes discussions on flooding, stormwater runoff, and invasive species, all identified hazards of concern in the 2021 HMP. The plan describes ways to reduce the impact of those hazards.</p> <p>The full plan can be viewed online here: https://tompskinscountyny.gov/planning/comprehensive-plan</p>					
Capital Plan	Yes	2020 Update	County	Tompkins County Administration	No
Comment:					
Disaster Debris Management Plan	In Development	-	County	Tompkins County Planning	No
Comment: Will be developed as part of resiliency and recovery plan work.					
Floodplain or Watershed Plan	Yes	Cayuga Lake Watershed Protection Plan, 2017	Regional	Tompkins County Water Resources Council	No
<p>Comment: County participates in the Cayuga Lake Watershed Intermunicipal Organization: https://www.cayugalake.org/the-watershed/restoration-protection-plan/; While not a formal plan, the County does have Watershed Assessments for most of the County - https://tompskinscountyny.gov/planning/water-resources-watershed-assess.*</p>					
Stormwater Plan	No	-	Conducted at local level	-	No
Comment:					
Open Space Plan	Yes	2009	County	Tompkins County Department of Planning & Sustainability	No
<p>Comment: Tompkins County established plans that identified important local natural and agricultural open spaces: Tompkins County Conservation Plan I and II.</p> <p>Part I - https://tompskinscountyny.gov/files2/planning/Natural Agriculture/Tompkins County Conservation Plan%2009-07.pdf</p> <p>Part II - https://tompskinscountyny.gov/files2/planning/Natural Agriculture/FINAL Tompkins Conservation Plan Part II%2004-10.pdf</p> <p>* -</p>					
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	Yes	2018	County	Tompkins County Department of	No



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
				Planning & Sustainability	
Comment: Tompkins County Habitat Connectivity Strategy - https://tompkinscountyny.gov/files2/planning/Natural_Agriculture/FINAL%20TC%20Connectivity%20Strategy.pdf					
Economic Development Plan	Yes	2015	County	Ithaca Area Economic Development	No
Comment: Tompkins County Economic Development Strategy - http://tcad.org/services-2/economic-strategy/					
Shoreline Management Plan	No	-	-	-	Yes – coastal areas only
Comment:					
Community Wildfire Protection Plan	No	-	-	-	No
Comment:					
Forest Management Plan	Yes	2007	County	Tompkins County Department of Planning & Sustainability	No
Comment: The purpose of the Tompkins County Forest Management Plan is to provide for the sustainable management of the forest- lands owned by Tompkins County. The plan can be viewed online here: https://tompkinscountyny.gov/files2/planning/Sustainability/Forest%20Mgt%20Plan%202007.pdf					
Transportation Plan	Yes	2019	County	Ithaca-Tompkins County Transportation Council	No
Comment: The 2040 Long Range Transportation Plan (LRTP) provides a 20-year vision for the metropolitan transportation system and represents the product of an extensive public participation effort. It provides a fiscally constrained program for transportation improvements over the twenty-year life of the plan. In addition, the LRTP provides specific recommendations for additional transportation and related planning activities that should be carried out in order to achieve the goals and objectives. The plan can be viewed online here: https://tompkinscountyny.gov/itctc/lrtp.					
Agriculture Plan	Yes	2015	County/Local Governments	CCETC	Yes
Comment: The purpose of the Tompkins County Agriculture and Farmland Protection Plan is to prioritize and guide the actions of county and town governments, agricultural agencies, businesses, farmers, and the community at large in responding appropriately to the needs, conditions, and opportunities that will maintain a viable agricultural economy in the County. The mission of the plan is to encourage farming in the county through local initiatives which create favorable conditions that allow farmers to operate economically viable enterprises. The plan can be viewed online here: https://tompkinscountyny.gov/files2/planning/Rural%20Resources/documents/TC%20Ag%20&%20Farmland%20Protection%20Plan%20Complete%207-20-15.pdf					
* Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP)	Yes	2019	County	Department of Emergency Response	Yes



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Comment: To establish procedures for County government and affiliated emergency responders to follow in the event of a disaster, as defined by Article II-B of the New York State Executive Law and to direct the development of a CEMP. Tompkins County is the process of updating its CEMP and will align with the HMP as relevant.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	2020	State and County	Department of Emergency Response	Yes
Comment: The THIRA provides information on the natural and man-made hazards the County is susceptible to and provides a ranking of each hazard risk. The hazards posing the most risk include flooding, active shooter, severe storm, and major transportation accidents.					
Post-Disaster Recovery Plan	No				No
Comment: Required post disaster within 30 days. Aspects that may make up portions of a post-disaster recovery plan will be developed as a part of companion resiliency and recovery plan.					
Continuity of Operations Plan	In process	-	County	County Departments	No
Comment: The County has developed a range of continuity plans and tools. Those tools will be further developed through the work included the companion resiliency and recovery plan.					
Public Health Plan	Yes	Various. See Below.	County	County Health	No
Comment:					
Name of Plan		Year	Comments		
Pandemic Flu Plan		2008	Update draft completed of summer 2019		
Mass Fatality Plan		2010	Currently under revision		
Public Health Emergency Preparedness & Response Plan		2014	Currently under revision		
Medical Countermeasures Plan		2018			
Ebola Response Plan		2015	Tompkins County is one of the few jurisdictions that have executed a full scale, real time Ebola response exercise.		
Zika Action Plan		2021	Updated annually and submitted to NYSDOH for review		
Isolation & Quarantine		2017			
Public Health Asset Distribution Plan		2018	This plan replaced the old Strategic National Stockpile plan.		

Table 9.1-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	No – County has no land use authority
Does your jurisdiction have the ability to track permits by hazard area?	NA
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.1.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Tompkins County.



Table 9.1-4. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	No	Planning Advisory Board is active and provides guidance on planning activity but has no land use authority
Mitigation Planning Committee	Yes	Coordinated out of the Planning Dept. - Active when plans are being developed or updated and includes representation from each municipality
Environmental Board/Commission	Yes	Tompkins County Environmental Management Council / Water Resources Council provides guidance on environmental issues but has no land use authority
Open Space Board/Committee	No	County Planning Advisory Board serves in the role of providing direction on conservation actions; the Tompkins County Conservation Partners is a group of conservation agencies that provides strategic direction
Economic Development Commission/Committee	Yes	Ithaca Area Economic Development Board
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Swift911
Maintenance programs to reduce risk	Yes	Various highway and facility actions
Mutual aid agreements	Yes	Partnerships with Verizon, NYS Gas and Electric, hospitals; mutual aid plan for fire and EMS agencies in County
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Tompkins County Department of Planning & Sustainability has several staff experienced in this field
Engineers or professionals trained in building or infrastructure construction practices	Yes	Tompkins County Facilities and County Highway have staff engineers and building officials
Planners or engineers with an understanding of natural hazards	Yes	Tompkins County Department of Planning & Sustainability has several staff experienced in this field
Staff with expertise or training in benefit/cost analysis	Yes	Tompkins County Department of Planning & Sustainability has a staff member who has attended FEMA BCA Training
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	The County has a well-developed GIS capability through its ITS Department and have all appropriate equipment and software
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	No	-



Resources	Available? (Yes or No)	Department/ Agency/Position
Surveyor(s)	No	-
Emergency Manager	Yes	The County Department of Emergency Response Department Head serves this role
Grant writer(s)	Yes	Several Departments throughout County are experienced grant writers
Resilience Officer	No	-

9.1.4.3 Fiscal Capability

The table below summarizes financial resources available to the Tompkins County.

Table 9.1-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes, competitive (not an entitlement community)
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

9.1.4.4 Education and Outreach Capability

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

Table 9.1-6. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes – the County has a Communications Director who organizes a range of messaging. The County also has a PIO team made up of various departments and representatives from other groups and colleges in the region. There is also a staff County Preparedness Coordinator.
Personnel skilled or trained in website development?	Yes – several staff throughout the County are experienced in web development.
Hazard mitigation information available on your website; if yes, describe	Yes – resources on mitigation are available at https://www2.tompkinscountyny.gov/planning/climate-adaptation



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes – Facebook and other social media often utilized for mitigation and response planning.
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes – Environmental Management Council has Adaptation Committee; also, active Local Emergency Planning Committee (LEPC) is convened by DoER
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes – Swift911
Warning systems for hazard events; if yes, briefly describe.	Yes – the County uses 211, IPAWS, EAS, mass notification system, and NY Alert
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No

9.1.4.5 Community Classifications

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

Table 9.1-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Not applicable	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Not applicable	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Not applicable	-	-
NYSDEC Climate Smart Community	Yes	Silver Level	2019
Storm Ready Certification	Yes	Need to renew by July 2021	2018
Firewise Communities classification	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.1.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

- Does Tompkins County have access to resources to determine the possible impacts of climate change upon the Tompkins County? Yes
- Is the administrative supportive of integrating climate change in policies or actions? Yes



- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the Tompkins County? Yes

Table 9.1-8. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Infestation and Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High

**High Capacity exists and is in use*

Medium Capacity may exist, but is not used or could use some improvement

Low Capacity does not exist or could use substantial improvement

Unsure Not enough information is known to assign a rating

9.1.4.7 National Flood Insurance Program

Management and regulation of the regulatory floodplains is done at the local level. Refer to the individual jurisdictional annexes for details on the NFIP for each municipality.

9.1.4.8 Additional Areas of Existing Integration

- **Tompkins County Sheriff’s Office** - The Sheriff’s Office has plans, policies and procedures in place. The Sheriff’s Office is an active participant in Local Emergency Planning Committee (LEPC) that is inclusive of first response agencies, city departments, schools, emergency managers, public information officers, non-profit and private members.
- **Training and Exercise Committee** – This is a sub-committee of the LEPC made of up first responders, law enforcement and others that works closely with hospitals, schools, and the airport.
- **Public Outreach** - The Public Information & Outreach (PIO) team conducts outreach activities for National Preparedness Month. The Tompkins County Health Department actively speaks with local businesses and schools about health emergency preparedness and briefs the community on plans and gather community feedback. The County Office for the Aging and the Department of Social Services engage in outreach efforts as well. Other County agencies attend community events, conduct outreach and work closely with municipalities. The County has a dedicated website for citizen awareness and preparedness. The County additionally distributes FEMA materials during outreach events. The County has also participated in the Governor’s Citizens Preparedness training and leverages real world events to conduct outreach and educate the public. They actively seek engagement from the public to participate in County exercises.



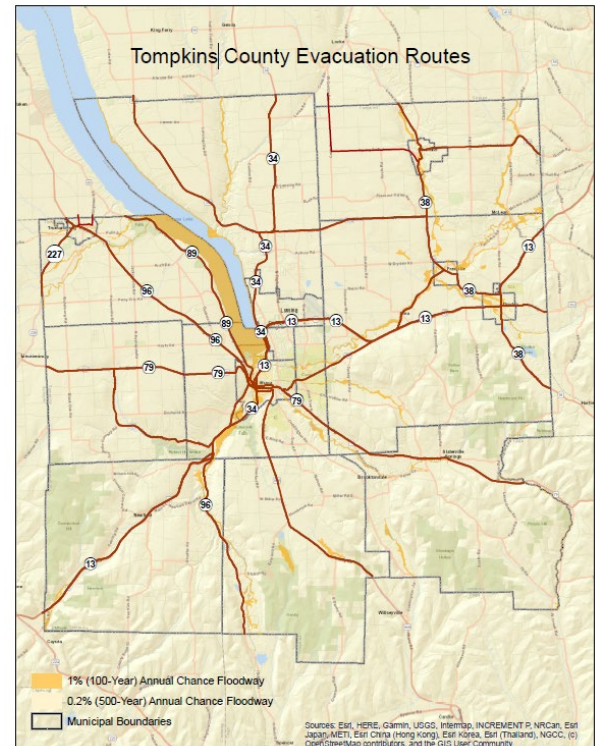
- **Conservation and Mitigation** – The County recognizes the multiple benefits to a range of conservation, land use and mitigation measures. The County also regularly invests in projects that advance both conservation and mitigation goals through its Natural Infrastructure Capital Program. Lands that provide ecosystem services and risk reduction measures, such as upland wetland and forestland, are formally protected through this program.
- **Resiliency and Recovery Planning** – Recognizing the need to strengthen community resiliency through the refinement of recovery planning measures, Tompkins County obtained a grant through the New York State Department of State to develop a resiliency and recovery plan of which the hazard mitigation serves as a piece of. Work on this effort will aim to better connect the four phases of emergency management – mitigation, preparedness, response – and recovery.

9.1.4.9 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

Tompkins County relies on its NYS highways for evacuation routes both through and within the county. As an example, for flood noted in the map below, evacuation routes are overlaid with mapped floodplains. Any need to navigate around flooded areas could be accommodated largely by a combination of State Highways. Most expansive flood plain areas are located in the City of Ithaca, so in the case of an active flood event impacting the City, travelers across the County would be encouraged to avoid travelling through the City and instead be routed around. The location of Cayuga Lake naturally directs traffic through the City so it is important that safe routes are clearly identified and communicated through a variety of formats. More detailed routing and communication measures are outlined in each separate jurisdictional annex where high risk areas are clearly identified.



Sheltering

A list of active shelters and their capabilities are maintained and regularly updated by the American Red Cross and the Tompkins County Department of Emergency Response and shared with the County Hazard Mitigation Coordinator in the Department of Planning & Sustainability. In some cases, both official and unofficial shelters noted in the municipal annexes in which they lie.

Temporary Housing

Temporary housing locations are largely determined by each local municipality. Short term temporary housing may in part be fulfilled by area hotels, collegiate residence halls (based on time of year) and area State Parks. Longer term housing options are evaluated and identified in local municipal annexes.

Permanent Housing

Based on local land use authority, permanent housing locations are determined by each local municipality. Most Tompkins County communities have identified locations, through local planning and zoning efforts, where existing infrastructure/land can sustain an increase in permanent housing. Additionally, please refer to Figure 4-15 in the Section 4 (County Profile), which provides information on Tompkins County buildable lands.

9.1.5 Tompkins County Hazard Event History

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 County's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. For details of hazard events that impacted the County, refer to Volume I, Section 5.0 of this plan.

9.1.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The Hazard Profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. Refer to Sections 5.1 (Methodology) and Section 5.3 (Risk Ranking) for details on the County's risk assessment results and data used to determine the ranking.



9.1.6.1 Critical Facilities and Lifelines

New York Department of Environmental Conservation (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 Special Flood Hazard Area (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, the 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 500-year flood even, or worst damage scenario. For those that do not meet this criterion, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies County critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.1-9. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Tompkins County Dept. of Motor Vehicles	Government	No	Yes	2021-Tompkins County-006
Tompkins County Old Jail	Government	No	Yes	2021-Tompkins County-006
Tompkins County Old Courthouse	Government	No	Yes	2021-Tompkins County-006
Tompkins County Courthouse	Government	No	Yes	2021-Tompkins County-006

Source: 2020 HAZUS Analysis

9.1.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Tompkins County ranked the degree of risk to each hazard as it pertains to their own community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Tompkins



County. The County has reviewed the hazard risk/vulnerability risk ranking table as well as its 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 Tompkins County indicated the following:

- Flooding remains the hazard that has the broadest impact to Tompkins County that is also the hazard that we can collectively do the most to reduce risk.
- In addition to the conservation impacts of HABs and Infestation/Invasive Species, there is considerable physical and economic impacts anticipated from these hazards.
- The County supports the hazard rankings identified in this planning effort.

Table 9.1-10. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	High
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

**Tompkins County changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Tompkins County Steering Committee*

9.1.6.3 Identified Issues

Tompkins County has identified the following vulnerabilities within their community:

- Much of the County is more vulnerable to flooding due to inaccurate, outdated Flood Insurance Rate Maps (FIRMs). FIRMs are currently being updated and should be finalized in 2022. Map Update process will provide opportunity to educate community on flood risk, mitigation and benefits of flood insurance.
- Certain populations, including those of low-income, the homeless and the elderly, bear a disproportionate burden of impact from natural hazards.

Specific areas of concern based on resident responses to the Tompkins County Hazard Mitigation Citizen survey include:

- Respondents are most concerned with climate change, drought, extreme temperatures, severe weather, and severe winter storms.
- Most respondents feel somewhat prepared to get along without electricity or natural gas for one to 5 days.



- Most respondents have not had their residence damaged by a hazard event.
- Most do not have property located in a designated floodplain nor do they have flood insurance.
- Most do not know of any particular community vulnerabilities that impact particular groups such as children, elderly or those with mobility issues.
- Most respondents think that their municipality cares about their well-being in relation to hazard events.

9.1.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.1.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.1-11. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		1. Next Steps Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
					Cost	Level of Protection	
TC 1	Improve general outreach information through Tompkins Ready and other formats. Include in that outreach an increased awareness on what warning and advisory systems mean.	All Natural Hazards	DOER	Complete!	Cost	-	Active, but relying more on 211. Not an action that needs to be continued. Currently utilize 211, Facebook/twitter.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 2	Establish and promote undeveloped buffers for streams and wetlands. This should include continuing the funding and administration of the Tompkins County Stream Restoration and Flood Hazard Mitigation Program.	Flash Flood, Landslide, Water Contamination	TCPD	In Progress	Cost	~\$5,000 annually	Active action which is now a part of the County's Natural Infrastructure Capital Program.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	Bank stabilization, water quality improvements	
TC 3	Replacement/rehabilitation or other resilient actions for transportation infrastructure with reoccurring flooding issues (see list of specific County locations in Appendix H)	Flash Flood, Severe Storm	TC Highway Division	In Progress	Cost	-	Continue and refine action based on updated risk analysis.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 4	Continue supporting aquifer studies to gain better understanding of regional groundwater and to enhance their protection	Flood (Flash & Lake)	TCPD	In Progress	Cost	-	Aquifer studies currently occurring in the Town of Dryden, but, discontinue action as USGS funding support for this program is concluding.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 5	Increase collaboration between government and community organizations	Epidemic	TC Health Dept.	In Progress	Cost	-	Update action to reflect collaboration of pandemic planning across organizations.
					Level of Protection	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		1. Next Steps Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
					Damages Avoided; Evidence of Success	Cost	
	regarding the containment and response plans for epidemic events				Damages Avoided; Evidence of Success	-	
TC 6	Improve farm health by participating in the integrated disease prevention through the NYS Cattle Health Assurance Program and supporting agricultural agencies that assist farms in improve this health.	Epidemic	SWCD	Complete!	Cost	Low	Discontinue, action complete.
					Level of Protection	Moderate	
TC 7	Further identify vulnerable populations, including disabled, elderly, children, non-native speakers, and the homeless and identify mitigation measures to reduce adverse impacts to these groups from hazard impacts	Multi-Hazard	County Human Services Cabinet	Complete!	Damages Avoided; Evidence of Success	Increased public knowledge	Vulnerable populations are better identified and discussed as part of this planning work. Action should be updated to identify actions to help reduce risk to vulnerable populations.
					Cost	Low	
TC 8	Establish and implement a system for regularly collecting detailed information about structural damages, costs, injuries and other details relevant to tracking impacts of hazard events.	Multi-Hazard	DOER	Complete!	Level of Protection	Moderate	Process currently in place at DOER for collection damages related to hazard events. Process could be improved for ease of data collection with advancements in technology. Explore as new action.
					Damages Avoided; Evidence of Success	Facilitated Planning	
TC 9	Develop a County-wide debris management plan	All Natural Hazards	County Public Works Cabinet	In Progress	Cost	~\$30,000	Debris management plan will be developed as a part of NYS Department of State funded companion resiliency and recovery plan (2021).
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
					Cost	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		1. Next Steps Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
					Level of Protection		
TC 10	Conduct annual climate science outreach to municipalities and other large institutions and businesses to share latest climate change information for use in the design of a variety of work, including capital projects	All Natural Hazards	TCPD	Ongoing	Level of Protection	-	This is an ongoing capability that is conducted as updates are provided. The Northeast Regional Climate Center (NRCC) at Cornell as well as updates to the State ClimAid report are used as the foundation of this outreach.
					Damages Avoided; Evidence of Success	-	
TC 11	Meet annually with utilities to discuss needs and operations to ensure preparation for increasing storm events, including tree trimming, supplies of repair materials, and backup plans for outages. The meeting should also focus on increasing communication and coordination, during, and after events.	Severe Storm	City of Ithaca	Ongoing	Cost	-	DoER actively attends meetings with NYSEG regarding this and is the more appropriate lead on this action.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 12	Continue to advocate for the update of county Flood Insurance Rate Maps. In addition look for ways to map additional flood-related hazards and manage development in high risk areas. This could include the development of a pilot project with USGS to create interactive flood inundation maps for a stream corridor with regular flooding concerns, such as Fall Creek or Sixmile Creek	Flood (Flash & Lake)	TCPD	Complete!	Cost	High	Discontinue, FIRMs currently being updated and should be finalized by 2022.
					Level of Protection	High	
					Damages Avoided; Evidence of Success	Better flood maps	
TC 13	Conduct an enhanced inventory of critical facilities in	Flood (Flash & Lake)	DOER	In Progress	Cost	-	Actively being done for all County and included as a part of the resiliency and



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		1. Next Steps Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	the County and share information with municipalities and other facility owners. The inventory should include facilities for water and wastewater treatment, transit operations, emergency responder operations, and culverts and bridges				Level of Protection	-	recovery plan and other efforts. Discontinue.
					Damages Avoided; Evidence of Success	-	
TC 14	Once critical facilities have been inventoried, perform engineering-based risk assessments that take into account projected climate change, to understand potential impacts to critical facilities and service operations under different climate change scenarios. Assessments should include complete adaptations plans that include decision making software, such as the COAST model, and include recommendations for retrofits or acquisitions based on these assessments	Flood (Flash & Lake)	Municipalities	In Progress	Cost	~\$20,000	Currently underway as a part of Tompkins County resiliency and recovery plan work (2021).
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 15	Convene an annual meeting and training session for all municipal Floodplain Administrators to discuss topics of interest and address training needs	Flash Flood	TCPD	No Progress	Cost	Low	Continue and seek to convene group in 2021 in preparation for FIRM updates.
					Level of Protection	High	
					Damages Avoided; Evidence of Success	NA	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		1. Next Steps Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
					Cost	Level of Protection	
TC 16	Develop and implement a plan to reduce flood damage in the Sixmile Creek Watershed, including specific attention to aging pipeline crossings along the Creek	Utility failure, Flash Flood	Town of Caroline	In Progress	Cost	-	Pipeline analysis complete; some mitigation measures complete, can discontinue action as work has been documented and priorities are monitored as a part of mitigation plan update.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 17	Support dredging in and around the Cayuga Inlet Flood Control Channel to reduce threat of flood inundation	Lake Flood	City of Ithaca	In Progress	Cost	-	Dredging project largely complete in Cascadilla Creek, plans currently active for dredging Inlet. Continue as action in update to allow for certification of Inlet levee.
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 18	Create a database and map of fire hydrants (including dry hydrants) and water resources that can be used for firefighting and share that information with municipalities. Based on this information develop an action plan for improving access to these resources.	Fire	DOER	Complete	Cost	Moderate	Action complete for several fire districts and is their area of responsibility. Much of this data has been transferred to ITS. Discontinue.
					Level of Protection	High	
					Damages Avoided; Evidence of Success	Enhanced EMS/ FIRE Services	
TC 19	Work with local businesses to formalize continuity of operations plans	Terrorism	DOER	Active	Cost	~\$20,000	COOP planning addresses all hazards and added work is being done related to that as part of the NYS Dept of State funded resiliency and recovery plan (2021).
					Level of Protection	-	
					Damages Avoided; Evidence of Success	-	
TC 20	Analyze impacts from droughts across sectors and develop more comprehensive	Drought	DOER	Active	Cost	-	Some drought impacts to be addressed through Resiliency and Recovery Plan
					Level of Protection	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		<ol style="list-style-type: none"> Next Steps Project to be included in 2021 HMP or Discontinue If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why.
					Damages Avoided; Evidence of Success		
	drought management plans and management systems				Damages Avoided; Evidence of Success	-	(2021), but Soil and Water should be listed as likely more appropriate lead party.
TC 21	Engage the NYS Canal Corporation in proactive discussions to develop a process for regulating lake levels	Lake Flood	City of Ithaca	Complete	Cost	Low	Clarification of lake level management done as a part of the City flood inundation effort. Discontinue.
					Level of Protection	Moderate	
					Damages Avoided; Evidence of Success	Increase in Intermunicipal and intercounty collaboration	



9.1.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

Tompkins County has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- County helped to implement both phases of the Ludlowville Stormwater Control Project, with funding support from FEMA and NYSDEC, which reduces flood risk in the Hamlet of Ludlowville, Town of Lansing.
- County successfully obtained resiliency planning funding from the New York State Department of State to implement various aspects identified in the previous mitigation plan, including development of a debris management plan, a public/private continuity of operations planning process and drought/flood analysis for critical facilities and lifelines.

9.1.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

Tompkins County participated in a mitigation action workshop in October 2020 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: e.g., 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).

Table 9.1-12 summarizes the comprehensive range of specific mitigation initiatives Tompkins County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives are previous actions carried forward from the last plan to be again included in this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 the actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.1-13 provides a summary of the prioritization of all 18 proposed mitigation initiatives for the Plan update.



Table 9.1-12. 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
2021-Tompkins County-001	Tompkins County Cover Crop Leadership Program	2, 3	HABs, Flood, Severe Storm, Drought	Problem: Exposed soil on farmland in Tompkins County has eroded fields and disrupted road infrastructure during flood events. Associated runoff further contaminates roadside ditches and connected waterways. This contamination decreases water quality and exacerbates the potential for the development of HABs. Solution: Implement a program that includes adequate equipment, materials, and staffing to expand cover crop implementation on area farmland.	No	No	3 Years	Tompkins County Soil and Water Conservation District (TCSWCD)	\$660,000	Broad reaching water quality, infrastructure and soil benefits	WQIP, USDA CSP/EWPP, EPA Nonpoint Water Source Project Grants	High	NSP	NR, PP
2021-Tompkins County-002	Tompkins County Green Ditch Improvement Program	1, 3	Flood, Severe Storm, HABs	Problem: County road ditches regularly convey excessive amounts of water during flood/severe storm events which threatens infrastructure and can further convey contaminants that have adverse water quality impacts and exacerbate HABs. Solution: Develop a "green ditch" improvement program that identifies different options to utilize materials to repair road ditches and/or improve function on county roads. This program should develop a clear blueprint of the equipment and materials required for various situations along with all the associated costs and how impacts will be evaluated in order to share with other municipalities. The first phase of project would identify priority locations for "green ditch" improvements – and outline pilot projects that could be implemented – in order to sharpen cost estimates and clarify implementation obstacles.	No	No	5 Years	Tompkins County Highway; Town Highway Departments	\$300,000 Total Estimate; Phase I \$30,000	Water quality and protection of County infrastructure	FEMA BRIC, NYSDEC WQIP, Green Innovation Grant Program (EFC GIGP), Community Resilience Training Program, NYS Climate Resiliency Farming Program, Cornell Local Roads	High	SIP, EAP, NSP	PP, SP, NR
2021-Tompkins County-003	Flood Insurance and Mitigation Outreach	4, 5	Flood	Problem: Several residents living both in and outside of the current Special Flood Hazard Areas (SFHAs) in Tompkins County do not carry flood insurance, nor do they know about the benefits of the NFIP, resulting increased vulnerability to flood events. Solution: To increase local "flood literacy" as well as reduce flood vulnerability, the County and local partners should develop and implement an outreach and education program to inform residents on SFHAs, the benefits of flood insurance and how they can obtain it. Outreach should come through a variety of formats and should aim to reach those individuals who are most vulnerable to flood risk.	No	No	1 Year	Tompkins County Dept. of Planning & Sustainability (DPS); Tompkins County Department of Emergency Response (DOER)	\$15,000	Increased education and resiliency across county	Community Resilience Training Program, National Endowment for the Arts Our Town Grant, Partners for Places Funding, EPA Environmental Justice Small Grants Program	High	EAP	PI
2021-Tompkins County-004	Groundwater Vulnerability Evaluation	1	Drought	Problem: Many rural landowners who rely on private wells are vulnerable to water shortage as drought events become more frequent in the region. Solution: Conduct a study to clarify which parts of the county are most vulnerable to groundwater shortages and identify potential options to address shortages. Develop a range of solutions to pursue in times of shortage, as well as proactive solutions that could be undertaken to prevent shortages from occurring. Consider building off of work local communities such as Enfield has done on this front with the New York Rural Water Association and explore the use of sentinel wells from aquifer studies to help monitor groundwater issues.	No	No	3 Years	Tompkins County Environmental Health, DPS	~\$30,000	Redundant water supply plan	Resilient Communities Program, USDA Water and Environmental Program FEMA BRIC, New York Rural Water Association	Medium	NSP, LPR	NR, PR, ES

Table 9.1-12. 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
2021-Tompkins County-005	Expanded and Improved Broadband Coverage	1,4	All Hazards	Problem: Communications through the county are sometimes interrupted, particularly in rural parts of the county, which can result in increased vulnerability to hazard events. Specific areas of concern include locations between Dryden and Caroline, and the southern portion of Caroline, Newfield, Western Enfield, Groton, and Danby. Solution: The County is actively working with the Southern Tier Network and Fujitsu to understand options for supporting expansion of broadband in the county. Once this work is complete the County and municipal partners will work to implement the actions identified in the study to improve broadband coverage and access in underserved areas	No	No	1 Year for the feasibility study, Many Years for build-out of infrastructure	DPS	\$80,000 for the feasibility study, millions for build-out	Increase communication capabilities throughout county; provide continuity of operations during a disaster	REDC, Federal Grant Sources, Local Funds	Med	SIP	ES
2021-Tompkins County-006	County Facility Flood Mitigation Assessment	1,4	Flood	Problem: The Tompkins County DMV, Old Jail, Old Courthouse and County Courthouse are located in part of the currently mapped 500-Year Floodplain. Solution: Further assess these County buildings to mitigate flood impacts and determine steps necessary for retrofitting and also for any necessary education or evacuation plans for use in times of flood. If any larger scale retrofits are determined to be necessary, apply for FMA funding to implement facility improvements.	Yes	No	3 Years	Tompkins County Facilities	Unknown	Unknown	HMGP, USACE Floodplain Management Services Program, USACE Small Flood Control Program, Local funds	Low	SIP	PP
2021-Tompkins County-007	Non-Emergency Protective Resilience Hubs	5	Extreme Temperatures, Severe Storm, Severe Winter Storm, Disease Outbreak	Problem: At-risk populations lack safe, clean locations to gather during hazard events that are not extreme enough to require that formal shelters be established. Solution: Conduct feasibility study for the development of publicly accessible protective resilient spaces that could be formed and supported by local service providers. Feasibility study should outline when such a facility would be used, key components that such a space should include and the types of groups that should be reached to inform them of the facility services.	No	No	3 Years	COFA (County Office for the Aging), TC Family and Children Services	\$10,000	Safe space for those isolated individuals and those without permanent residences to utilize in adverse weather conditions, including those events where shelters may not be open.	EPA Environmental Justice Small Grants Program, Partners for Places Funding, Local Funds	Med	SIP	PR
2021-Tompkins County-008	Model Tree Management Planning	3	Invasive Species, Severe Storm	Problem: Invasive species and severe storms can have on negative impacts due to tree fall and damage to public property. Solution: Work with "Joint Forestry Team" to identify guidance document and key components to a local tree management plan. The plan should include funding options to help develop tree inventories, management plans, native planting and implementation of recommendations.	No	No	2 Years	TCSWCD, Joint Forestry Team (US Forest Service, NRCS, National Association of State Foresters, Natural Association of Conservation Districts)	\$10,000	Unknown	Cornell City and Regional Planning Internship Program, New York State Main Street Program, NYSDEC Tree Inventory Funding	Medium	NSP	NR
2021-Tompkins County-009	Low Income Heating/Cooling Investment	4,5	Extreme Temperature	Problem: Low-income and elderly community members have higher risk to extreme temperature events in part due to inefficiencies in HVAC systems and under-insulated residences. Further, there is a lack of coordination between the various energy improvement funding options. Solution: Coordinate, publicize and implement the programs that advance retrofits for energy efficient heating and cooling for low-income affordable housing. Should further examine barriers (social/physical) for improving access to these resources and integrate hazard mitigation funding actions along with energy improvements.	No	No	2 Years	Get Your Green Back Tompkins – Cornell Cooperative Extension of Tompkins County (CCETC)	Varied	More resilient, cost effective housing	NYSERDA, grants and loans, HEAP	Low	LPR	PR

Table 9.1-12. 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
2021-Tompkins County-010	Resilient Business Investment	1,2	All Hazards	Problem: Despite wide ranging threats many local businesses are hesitant to invest in risk reduction measures Solution: Summarize mitigation recommendations and funding resources available to local businesses and push information out through a variety of formats. Initial focus will be on flood mitigation efforts given broad interest and concern on this hazard.	No	No	3 years	Tompkins County Chamber of Commerce	Low	More resilient businesses and economy	New York Main Street Program, Institute for Business and Home Safety, Insurance providers	High	LPR	PR
2021-Tompkins County-TC – 011	Snow Removal Real-time Tracking Improvements	1,4	Severe Winter Storm	Problem: County Highway has invested in GPS telematics systems for its snow removal operations that provide real-time communication. System functionality is, however, limited to just location-based information. Solution: Continue supporting the installation of telematic systems on plows and other Highway vehicles to provide real-time location information – including through use of the Internet of Things - but also investigate additional technological options that can connect systems in order to increase the efficiency and safety of snow removal operations. Share findings of this technology with other highway departments in the region.	No	No	1 year	Tompkins County Highway, Cornell Local Roads	Low	High	State Hazard Mitigation Funds, Local Funds	Low	LPR	PR
2021-Tompkins County-012	Virgil Creek Dam Maintenance	1,4	Flood	Problem: The County-owned Virgil Creek Dam requires maintenance to ensure long term functionality. Disrepair will lead to failures in dam function and result in vulnerabilities downstream. Additionally, the surrounding community is unclear as to dam function and components including current dam failure warning system. Solution: Make necessary dam improvements and provide education to the community on the dam’s function and associated warning system.	No	Yes	3 Years	Town and Village of Dryden, Tompkins County	~\$75,000	Improved dam function, clearer understanding of warning system and what to do in case of dam failure	NYSDEC, National Dam Rehabilitation Program	High	SIP	SP, ES
2021-Tompkins County-013	Aquatic Invasive Species Management Plan	3	Invasive Species	Problem: Funding for hydrilla management is costly and does not have sustained funding support. Solution: Develop a long-term funding strategy for the management of hydrilla and other emerging aquatic invasive species.	No	Yes	4 years	Tompkins County Soil and Water Conservation District, Army Corps of Engineers	\$500,000 Annually	Sustained funding for long-term hydrilla management	NY PRISM, ACOE	Med	NSP	NR
2021-Tompkins County-014	Redundant Facility and Fleet Power Systems	1,4,5	Severe Storm	Problem: Large and small County energy users (buildings and fleet) rely on electricity to support government functions. Severe storms can disrupt electricity supply, and thus certain government functions. Solution: Assess County buildings to determine back up power needs such as permanent electric generators, or electric retrofits to accommodate generator use; and to explore options for independent, clean energy sources such as solar based electric vehicle charging stations.	Yes	No	2 Years	DoER, Tompkins County Facilities	Unknown	County Facilities and Fleet more prepared for disruptions to electric supply	NYSDEC CSC Grant Program, FEMA HMGP	Medium	SIP	PR, SP
2021-Tompkins County-015	Staff Support and Development for Resiliency Action Implementation	1-5	All Hazards	Problem: Local municipalities and agencies have expressed difficulty implementing certain hazard mitigation actions due to a lack of sustained planning capacity. Many communities do not have access to full-time staff or have staff that is trained to implement and sustain mitigation actions. In addition, support to provide enhanced outreach on activities to increase life safety (including dam safety) will provide increased public safety. Solution: Develop a program that provides builds and sustains local municipal capability for mitigation and resiliency action implementation, including dam safety This may include a program that focuses on matching young professionals and graduate level students directly with municipalities.	No	No	3 Years	Cornell University, Ithaca College, TC3 and Tompkins County	Unknown	Significant increase in mitigation project implementation	AmeriCorps, BRIC C&CB	Med	LPR	PR

Table 9.1-12. 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
2021-Tompkins County-016	Support Coordinated Public Health-Community Response Planning During a Communicable Disease	1,2	Disease Outbreak	Problem: Disease outbreaks are likely to continue to emerge and are a fast-evolving concern for the region, particularly in light of COVID 19. Solution: Review COVID-19 "after action reports" and identify improvements that could be put in place prior to next disease outbreak. This should include identifying which collaborations that emerged during the COVID-19 pandemic should be maintained and supported by the County, even after the COVID-19 crisis wanes.	No	No	1 Year	Tompkins County Health Dept and DoER	Low	Increased community safety and reduced impacts of pandemic	Operating Budget	Medium	LPR	PR
2021-Tompkins County-017	Local Government Hazard Event Impact Tracking	1,4	All Hazards	Problem: The process of collecting information about hazard events, including structural damages, costs, related injuries and other details relevant to tracking impacts of hazard events, is currently reliant on printed paper and not in a digital format. This makes tracking and updating critical information burdensome and difficult to reference. Solution: Establish and implement an electronic system for all entities in Tompkins County to easily collect, input and access detailed information about structural damages, costs, injuries and other details relevant to tracking impacts of hazard events of all sizes. Program should strive to integrate with other existing archival systems and be usable and accessible to all partners.	No	No	1 Year	DOER, ITS	Low	Increase understanding of damages after a hazard event; creates a system to track damages, losses, etc.	NYS Local Government Records Management Improvement Fund, Local Funds	High	LPR	ES
2021 – Tompkins County - 018	Joint Medical Supply Storage Facility Feasibility Study and Implementation	1,4	Disease Outbreak	Problem: Area medical providers, including Cayuga Medical Center (Tompkins County's sole hospital and key critical facility) lack adequate, secure, permanent storage facilities for medical material, including PPE, which limits their ability to comply with NYS Department of Health - Hospital PPE 90-Day Supply Requirements. Solution: Develop a feasibility study to reach out to other regional health agencies and organizations that may require preparedness storage needs. Such as study should clarify the size and requirements of a storage facility and identify potential locations that could be utilized or perhaps built.	Yes	No	2 Years	DOER, Cayuga Medical Center	Medium	Compliance with State Health regulations; increased capacity to address disease outbreak	CDBD CARES funding, HMGP, BRIC Capability and Capacity Building	Medium	SIP	ES
2021 – Tompkins County - 019	Dam Safety Program	1,2,3	Flood, Severe Storm	Problem: There are multiple "high hazard" Class C dams located within Tompkins County. While Tompkins County does not have any specific ownership rights over these dams, there are general outreach capabilities that could be conducted on a broad scale across the jurisdictions to increase resilience. Solution: In accordance with NYSDEC Dam Safety guidelines, the County will support annual inspection and update of the dams' Emergency Action Plans (EAPs) by engineers, and supported NYSDEC as necessary. If increased significant risk to the downstream areas is found, the County will work with the owner, engineers, and NYSDEC Dam Safety to develop a plan to update and improve the conditions of the dam. Also, the County should conduct outreach to all residents living within the vicinity of the dam, providing relevant response measures that could be used by private residents if the dam were to ever fail. This could include fact sheets, meetings, social media and Swift 911 notices, as well as other types of outreach.	Yes	No	5 years	Tompkins County	Low	Compliance and safety	BRIC, County Budget	High	EAP	PI

Table 9.1-12. 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
2021 – Tompkins County - 020	Beebe Lake Dam Clarification	1,2,3	Flood, Severe Storm	The hazard classification of the Lake Beebe Dam is unclear due to a conflict in the NYSDEC and Army Corps of Engineers data sets. The County will contact the NYSDEC and Army Corps of Engineers to confirm the hazard classification of the Lake Beeb Dam to resolve the conflict in categorization between the two data sets. In addition, the County will request a copy of the EAP for record.	N	N	1 Year	Tompkins County Dept of Planning & Sustainability	Low	Compliance and safety	County Operating Budget	High	LPR	PR

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

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

Table 9.1-13. 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	Total	High / Medium / Low
2021-Tompkins County-001	Tompkins County Cover Crop Leadership Program	0	1	1	0	0	0	0	1	1	1	1	1	1	1	9	High
2021-Tompkins County -002	Tompkins County Green Ditch Improvement Program	0	1	1	0	0	0	0	1	1	1	1	1	1	1	9	High
2021-Tompkins County – 003	Flood Insurance and Mitigation Outreach	0	0	1	1	1	1	1	0	1	1	0	1	1	0	9	High
2021-Tompkins County – 004	Groundwater Vulnerability Evaluation	1	0	1	1	1	1	1	0	1	1	0	0	0	0	8	Medium
2021-Tompkins County – 005	Expanded and Improved Broadband Coverage	1	0	1	1	1	0	0	0	1	1	1	0	0	0	7	Medium
2021-Tompkins County – 006	County Facility Flood Mitigation	1	1	1	1	1	0	-1	0	0	0	0	0	0	0	4	Low
2021-Tompkins County – 007	Non-Emergency Protective Resilience Hubs	1	0	1	1	1	0	0	0	1	1	1	0	0	0	7	Medium
2021-Tompkins County – 008	Model Tree Management Planning	1	0	1	1	0	0	0	0	0	1	1	0	0	0	5	Medium
2021-Tompkins County - 009	Low Income Heating/Cooling Investment	1	0	0	1	1	0	0	0	1	-1	1	0	0	0	4	Medium
2021-Tompkins County – 010	Resilient Business Investment	1	1	1	0	1	0	1	0	1	1	1	1	0	0	9	High
2021-Tompkins County – 011	Snow Removal Technological Improvement	1	0	1	1	0	0	0	0	0	1	0	1	0	0	5	Medium
2021-Tompkins County – 012	Virgil Creek Dam Maintenance	1	1	1	1	1	1	0	0	1	1	0	0	1	0	9	High



Table 9.1-13. 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	Total	High / Medium / Low
2021-Tompkins County – 013	Aquatic Invasive Species Management Plan	1	1	1	1	0	0	0	0	0	1	0	0	0	0	5	Medium
2021-Tompkins County – 014	Redundant Facility and Fleet Power Systems	0	0	0	1	1	0	0	1	1	1	0	0	1	1	7	Medium
2021-Tompkins County – 015	Staff Support and Development for Resiliency Action Implementation	1	1	1	1	0	0	1	0	1	1	1	0	0	0	8	Medium
2021-Tompkins County – 016	Support Coordinated Public Health-Community Response Planning During a Communicable Disease	1	0	1	1	0	0	0	0	1	1	0	1	1	0	7	Med
2021-Tompkins County – 017	Local Government Hazard Event Impact Tracking	1	1	1	1	0	0	1	0	0	1	1	1	1	1	9	High
2021-Tompkins County-018	Joint Medical Supply Storage Facility Feasibility Study and Implementation	1	0	1	1	0	0	0	0	1	1	0	0	1	1	7	Medium
2021 – Tompkins County - 019	Dam Safety Program	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
2021 – Tompkins County - 020	Beebe Lake Dam Clarification	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.1.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.1-14. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Flood	010, 015, 020	002, 005, 006, 012	001, 002	002, 003; 019	010, 015, 020	001, 002, 006	003; 019	001, 002,	002, 012	005, 012, 017
Severe Storm	010, 011, 015, 017, 020	005, 007, 014	001, 008	019	007, 010, 011, 014, 015, 020		019	008	014	005, 017
Severe Winter Storm	010, 015, 016, 017	005, 007			007, 010, 015					005, 017
HABs	010, 015, 017	002, 005	001; 002	002	010, 015	001, 002		001; 002	002	005, 017
Invasive Species	010, 013, 015	005	007, 014		010, 015			008, 013		005, 017
Drought	004, 010, 015, 017	005	001, 04		004, 010, 015, 017	001		001, 004,		004, 005, 017
Disease Outbreak	010, 015, 016, 017	005, 007, 018			007, 010, 015				018	005, 016
Extreme Temperatures	009, 010, 015, 017	005, 008			007, 010, 015	009				005, 017

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.1.9 Staff and Local Stakeholder Involvement in Annex Development

The County followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many jurisdiction representatives. 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 who participated and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.1-15. Contributors to the Annex

Name	Title	Method of Participation
Scott D. Doyle	DPS Associate Planner	Coordinator
Jon Negley	TCSWCD District Manager	Action Item Guidance
Jessica Verfuss	DOER Deputy Director	Shelter, Evacuation and Action Item Guidance
Jeff Smith	Highway Manager	Action Item Guidance
Angel Hinickle	TCSWCD Resource Conservation Specialist	Action Item Guidance
Katie Borgella	DPS Commissioner	Action Item Guidance



Action Worksheet			
Project Name:	Tompkins County Cover Crop Leadership Program		
Project Number:	2021-Tompkins County-001		
Risk / Vulnerability			
Hazard(s) of Concern:	HABs, Flood, Severe Storm, Drought		
Description of the Problem:	Exposed soil on area farmland has eroded fields during flood events and associated runoff sometimes contaminates roadside ditches that flow to waterway adding to the adverse impacts to water quality and potentially the development of local HABs.		
Action or Project Intended for Implementation			
Description of the Solution:	Implement a staffed program with adequate equipment and materials to increase the amount of farmland currently utilizing cover crops. Work with Cornell University and Cooperative Extension Services to discuss the development of this program.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is the critical facility located in the 1% annual chance flood area?	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:	-	Estimated Benefits (losses avoided):	
Useful Life:	3 Year Program intended to assess impact and chart frame formalization of program moving forward.	Goals Met:	Goals 2 and 3
Estimated Cost:	\$660,000	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021-2024
Estimated Time Required for Project Implementation:	3 Years	Potential Funding Sources:	WQIP, USDA CSP/EWPP, EPA Nonpoint Water Source Project Grants
Responsible Organization:	Tompkins County Soil and Water Conservation District and TC DPS	Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Invest in normal program	\$50,000	Limited impact
	Develop Cover Crop Leadership Program	\$220,000 annually for three year trial	Assess level of impact by number of farms participating, and number of added acres cover cropped
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Tompkins County Cover Crop Leadership Program	
Project Number:	2021-Tompkins County-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	None
Property Protection	1	Soil protection high
Cost-Effectiveness	1	Very cost effective, proven practice
Technical	0	Low tech solution
Political	0	None
Legal	0	None
Fiscal	0	None
Environmental	1	Significant environmental benefit
Social	1	Collective effort can have significant impact
Administrative	1	Easy to implement
Multi-Hazard	1	Benefits both flooding and HABs
Timeline	1	Can begin with limited lead up
Agency Champion	1	Soil and Water has led with great work on this subject
Other Community Objectives	1	Added way to support local farmland and further protect rural landscape
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Tompkins County Green Ditch Improvement Program		
Project Number:	2021-Tompkins County-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, HABs		
Description of the Problem:	County road ditches regularly convey excessive amounts of water during flood/severe storm events which threatens infrastructure and can convey contaminants that have adverse water quality impacts and exacerbate HABs. Areas include roads along Salmon Creek as well as the corridor of Route 79 and 96.		
Action or Project Intended for Implementation			
Description of the Solution:	Develop an improvement program that identifies different options to repair road ditches on county roads. This includes the procurement for the necessary materials, staffing, and an inventory of ditches that need to be improved. The program will improve the quality of the ditches and water quality and support the "greening" of county road ditches. First phase of project should include the prioritizing and scoping of important locations for improvement – and conducting pilot projects.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is the critical facility located in the 1% annual chance flood area?	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:	-	Estimated Benefits (losses avoided):	Water quality and protection of County infrastructure
Useful Life:	~10 years +. Well installed ditch improvements can last at least a decade.	Goals Met:	Goals 1 and 3
Estimated Cost:	~\$300,000	Mitigation Action Type:	SIP, EAP, NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021-2024
Estimated Time Required for Project Implementation:	5 Years	Potential Funding Sources:	FEMA BRIC, NYSDEC WQIP, Green Innovation Grant Program (EFC GIGP), Community Resilience Training Program, NYS Climate Resiliency Farming Program
Responsible Organization:	Tompkins County Soil and Water Conservation District and TC DPS	Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Invest as current	\$10,000	Limited impact
	Develop Green Ditch Program	\$60,000 annually for three year trial	# of miles of County Road supported by green ditches



Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Tompkins County Green Ditch Improvement Program	
Project Number:	2021-Tompkins County-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	None
Property Protection	1	Soil protection high
Cost-Effectiveness	1	Very cost effective, proven practice
Technical	0	Low tech solution
Political	0	None
Legal	0	None
Fiscal	0	None
Environmental	1	Significant environmental benefit
Social	1	Collective effort can have significant impact
Administrative	1	Easy to implement
Multi-Hazard	1	Benefits both flooding and HABs
Timeline	1	Can begin with limited lead up
Agency Champion	1	County Highway has led with great work on this subject
Other Community Objectives	1	Highly visible work that could translate to local government highway departments as well
Total	9	
Priority (High/Med/Low)	High	



9.2 Town of Caroline

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

9.2.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Caroline’s hazard mitigation plan primary and alternate points of contact.

Table 9.2-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Mark Witmer, Supervisor Address: 2670 Slaterville Road, Slaterville Springs, NY 14881 Phone Number: 607-539-6400 Email: supervisor@townofcaroline.org	Name/Title: Barry Goodrich, Stormwater Coalition Representative Address: 2670 Slaterville Road, Slaterville Springs, NY 14881 Phone Number: 607-227-2696 Email: codeofficer@townofcaroline.org
NFIP Floodplain Administrator	
Name/Title: Cory Williams, Code Officer and Stormwater Manager Address: 2670 Slaterville Road, Slaterville Springs, NY 14881 Phone Number: 607-539-6400 Email: codeofficer@townofcaroline.org	

9.2.2 Municipal Profile

The Town of Caroline is located Southeast of the Town of Ithaca, in Tompkins County, New York. The town’s total area is 55 square miles, and is made up of rolling hills, farms, and several small communities. Caroline borders Tioga County to the east and south. New York State Route 79 crosses through the northern part of the town. Caroline is home to many State forest lands, including Shindagin Hollow State Forest, Potato Hill State Forest, Hammond Hill State Forest, and Robinson Hollow State Forest.

Previously land of the Iroquois peoples, Caroline was part of the Watkins and Flint Purchase of 1791, and first settled in 1794. Formed from the Town of Spencer in Tioga County, Caroline was incorporated as a Town in 1811. Multiple churches in Caroline are listed on the National Register of Historic Places.



In 2004, Caroline became the 8th municipality in New York State to purchase wind power to provide part of municipal electric needs. By 2005, it purchased wind power for 100% of municipal electricity use. In 2008, volunteers coordinated the largest single-day distribution of energy-saving lightbulbs in rural New York, distributing over 1,400 lightbulbs to almost every household in the town. The majority of Caroline residents commute to the Ithaca area for work.

The Caroline Town Council (aka Town Board) is made up of four elected representatives serving 4-year terms. Town Council members include the Town Superintendent, Clerk, Highway Superintendent, and Justices. The offices of Building Codes and Historian are appointed by the Town Council. The Town Supervisor is responsible for routine administration and will act as the treasurer, pay salaries, and sell or lease land as directed by the town board. The Town Board is responsible for all legislation, adoption of town budgets, personnel matters, and the adoption of the Town Comprehensive Plan.

According to the American Community Survey, the town of Caroline has a population of 3,362.

9.2.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.2-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.2-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.2-2. Recent and Expected Future Development

Type of Development	2015		2016		2017		2018		2019	
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
Single Family	9	0	6	0	8	0	6	0	11	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	14	0	1	0	0	0	1	0	1	0
Total	23	0	7	0	8	0	7	0	12	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 2014 to Present										
Boiceville Cottages	Subdivision	140 Rental cottages, 1-2 bedroom		301 Boiceville Rd., Brooktondale, NY 14817				complete		



Type of Development	2015	2016	2017	2018	2019
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None Indicated					

SFHA Special Flood Hazard Area (1% flood event)
* Only location-specific hazard zones or vulnerabilities identified.

9.2.4 Capability Assessment

The Town of Caroline performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.2.4). The Town of Caroline identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.2.4.1 Planning, Legal, and Regulatory Capability

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



Table 9.2-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local	Local Code Department	Yes
<p>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017). Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</p>					
Zoning Code	No	-	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level. *During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Updated in 2018	Local	Local Review/planning board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730). *During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Code officer	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	-	Local	-	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY	State	NYS Department of State, Real Estate Agent	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
		Code - Article 14 §460-467			
<p>Comment: 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>					
Growth Management Regulation	No	-	Local	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primary tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p> <p>**The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Town Review Board	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA)	Local	Code officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <p>* Currently being updated – not included as mitigation action due to timing and expected completion before FEMA submittal.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	State	Tompkins SWCD	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					
Climate Adaptation	Yes	Comprehensive Plan 2021 Update	Local	Local Planning Board	NA



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	No
Comment:					
Planning Documents					
Comprehensive Plan	Yes	2020-21	Local	Planning Board	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level.</p> <p>The comprehensive plan is currently being updated with close adherence to the hazard mitigation plan update. The actions and goals are meant to closely correspond between the county's initiatives as well as the municipality's initiatives around climate smart communities.</p> <p>*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	-	-	-	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g. The town is looking to develop a new CIP					
Disaster Debris Management Plan	No	-	-	-	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	Yes	Restoration and Protection Plan	County	Intermunicipal Org.	No
<p>Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</p> <p>The municipality works closely with the Cayuga Lake Watershed and is involved in the County Water Resources Council.</p>					
Stormwater Plan	Yes	2018	Local	Watershed Committee	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No	-	-	-	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	No	-	-	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	-	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	Yes	NYCRR Part 390 Agricultural and Farmland Protection -	County	County Planning	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	-	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	2003 NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Town updates their CEMP, they will review the HMP					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	State Level only	State	State OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	-	-	No
Comment:					
Continuity of Operations Plan	No	-	-	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	No
Comment:					
Other: Emergency Response Plan	No	-	-	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					

Table 9.2-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.2.4.2 Administrative and Technical Capability

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



Table 9.2-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Energy Independent Caroline
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	TG Miller Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	Code officer
Planners or engineers with an understanding of natural hazards	Yes	TG Miller Engineers
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	Yes	TG Miller Engineers
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Code officer
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other	Yes	Stormwater Infrastructure – Highway Superintendent



9.2.4.3 Fiscal Capability

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

Table 9.2-6. 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	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other	No

9.2.4.4 Education and Outreach Capability

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

Table 9.2-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes – Webmaster
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes -Watershed Committee
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes – email listserv
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	No

9.2.4.5 Community Classifications

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



Table 9.2-8. 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	-	-
NYSDEC Climate Smart Community	Yes	Bronze Community	2019
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable
NP Not participating
- Unavailable

9.2.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.2-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High Capacity exists and is in use
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.2.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.



NFIP Floodplain Administrator (FPA)

Cory Williams, CEO

Table 9.2-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	No
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Code Enforcement officer/ Building Inspector determines damage
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	No, the maps are outdated and are from the 1980s
Resources	
What local department is responsible for floodplain management?	Building/ Code enforcement
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"> If so, what type of assistance/training is needed? 	Yes – general training and technical assistance
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Yes permit review
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	It depends - subjective based on property type
What are the barriers to running an effective NFIP program in the community, if any?	Funding



NFIP Topic	Comments
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	June 19, 2019
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	Local Law #2 of 2011
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> 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?	Through site Plan review
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No

9.2.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.2-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Caroline	12	17	\$41,923.91	0	NA

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of February 28, 2018. The total number of repetitive loss properties does not include severe repetitive loss properties

RL Repetitive Loss; SRL Severe Repetitive Loss

9.2.4.9 Additional Areas of Existing Integration

Emergency services, including firefighting and first responder services are provided by three local volunteer fire companies. As residents increasingly work outside the town, it is more difficult to recruit volunteers, even as the demand for services is increased. Significant and focused effort is required to



keep these essential volunteer services sufficiently staffed, trained, and funded to provide the community the emergency response that is needed. Fundraising activities of these companies, through pancake breakfasts and chicken barbeques, provide important social occasions and community gatherings for local residents. Increasing support and pride in these services will increase quality of life for all residents.

Climate change is a concern for many Caroline residents. There are many expected negative consequences arising from climate change, including the impact of changing rainfall patterns on local agriculture, the impact of more high-heat days on the health of humans and other animals, the impact of more frequent and more intense weather events and more frequent flooding events on Town infrastructure and the impact of changes in season timing on pollinating insects and migrating wildlife. Town actions in response to concerns over climate change include improving the energy efficiency of town buildings, replacing existing street lights with more efficient LED bulbs, installing electric vehicle charging stations, and conducting a greenhouse gas emissions inventory. In recognition of these and other actions, Caroline has been awarded a bronze level certification in New York State's Climate Smart Communities program. The town is currently conducting a climate vulnerability study to identify areas and populations in the town that are particularly likely to be adversely impacted by climate change and possible strategies for reducing those impacts.

Natural resources are important in many ways to the vibrancy of Caroline. They provide recreational activities such as bird watching, hiking, fishing, and simply enjoying the beauty of the Town. Natural resources also improve the local economy by supporting agriculture and tourism, improve the resiliency of town infrastructure against damage from severe storms, and improve human health by cleaning the air and water and lowering stress levels. In 2019 the Town of Caroline conducted a Natural Resources Inventory (available at <http://www.townofcaroline.org/uploads/6/2/7/8/62781479/caroline-nri.pdf>).

9.2.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Town considers Route 79, a State route the primary road for evacuation. However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.



Sheltering

The Town has the following known emergency shelters. In the event that sheltering is needed, shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.2-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Brooktondale Community Center	Brooktondale NY	100	Yes	Yes	No	None	NA
Slaterville Fire Hall	Slaterville NY	100	No	No	Yes	None	NA
Town Hall	Slaterville NY	50	No	Yes	No	None	NA

Temporary Housing

The Town does not have any available land for temporary housing, as it is not necessarily needed due to the Town’s rural characteristics. Therefore, the Town has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.2-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
<p>se refer to the locations identified in Section 4 (County Profile) Table 4-9 as a starting point to identify potential temporary housing locations in neighboring communities.</p>					



Permanent Housing

The Town does not have any available land for permanent housing. While the Town did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations.

Table 9.2-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Please refer to the County-wide buildable land inventory in Volume 1, Section 4 (County Profile) of this plan.					

9.2.5 Hazard Event History Specific to the Town of Caroline

Town of Caroline has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the Town and its municipalities. The Town of Caroline's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Town of Caroline. Table 9.2-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.2-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding	No	Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
June 14-15, 2015	Heavy Rain and Flash Flood	No	A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to	While this event impacted the community, due to lack of resources damage



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	history has not been documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	While this event impacted the community, due to lack of resources damage history has not been documented.
July 24, 2017	Heavy Rain and Flash Flooding	No	Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
October 31-November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		No notable damage from this flood, though surrounding regions did get affected.

Notes:

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

9.2.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Caroline’s risk assessment results and data used to determine the hazard ranking.

9.2.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.2-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Town DPW	Government	Yes	Yes	2021-T CAROLINE-009

Source: Tompkins County

9.2.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each municipality 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 Caroline. The Town of Caroline has reviewed the County hazard risk/vulnerability risk ranking table as well as its 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 of Caroline indicated the following:

- The Town is overall less vulnerable to disease outbreak due to its relatively rural characteristics.
- While the Town has a large percentage of agricultural land, much of it is unused and thus the Town is not as vulnerable as originally calculated.
- The Town does not have major issue around wildfires due to the damp and cool climate of the area.



- The Town is actively increasing its resilience to flooding by replacing and repairing existing stormwater infrastructure.

Table 9.2-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Low*
Drought	Medium*
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Low*

Note: The scale is based on the following hazard rankings as established in Section 5.3.

*The Town of Caroline changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Town of Caroline

9.2.6.3 Identified Issues

The Town of Caroline has identified the following vulnerabilities within their community:

- Stormwater Management and cascading effects on residential properties.
- Water supply of water is primarily through private wells and some residents could experience water supply shortage or degraded quality.
- Given the rural characteristics of the municipality, some members do not have air conditioning and are vulnerable to extreme heat.
- Parts of the municipality does not have cell service and are vulnerable to potential disconnection during severe storm.

Specific areas of concern based on resident response to the Town of Caroline Hazard Mitigation Citizen survey include:

- The Town of Caroline is primarily concerned with flooding and erosion.
- Extreme temperatures are becoming more of a concern and heat shelters would be good to have in the near future.
- The Town does not have a municipal water system, so some residents are vulnerable to water supply shortage and degraded water.



9.2.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.2.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.2-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	-	
C1		Flood	Town of Caroline Watershed Committee	Continue local stream bank stabilization projects	Ongoing	Cost	-	Discontinued, ongoing effort
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
C2		Flash Flood	Town of Caroline Watershed Committee	Formalize protections and green infrastructure practices along stream banks to encourage riparian vegetation for channel and floodplain stabilization and wildlife habitat	Ongoing	Cost	-	Discontinued; ongoing effort
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



9.2.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Caroline has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Currently in the process of updating the comprehensive plan to incorporate climate change.
- Have been actively upgrading the existing stormwater infrastructure throughout the town.
- The Town is actively involved in other climate change related programs such as Climate Smart Communities in which it is actively pursuing its residents to increase their resilience by practicing smart land use measures and increasing dependence on renewable energy.
- The Town conducted its own climate vulnerability assessment in 2020.

9.2.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Caroline participated in a mitigation action workshop in 2020 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).

Table 9.2-19 summarizes the comprehensive range of specific mitigation initiatives the Town of Caroline would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.2-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.2-19. 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
2021-T CAROLINE-001	Ground Water Study	1,3	Flood/Drought	<p>Problem: The Town has previously experience water loss due to construction along Buffalo Road and damaging an aquifer.</p> <p>Solution: Conduct a separate study to better understand the cause of the ground failure related water depletion issue. Once completed, provide vulnerable and affected residents with potential solutions to have adequate access to water supply.</p>	No	No	6 months	Town Board and DPW	Medium	High	FEMA HMGP, Clean Water Act Section 604(b) Water Quality Planning Grants Water Quality Improvement Project (WQIP) Program	Medium	LP R	NR
2021-T CAROLINE-002	Adopt Zoning Ordinance	All Goals	All Hazards	<p>Problem: The Town of Caroline does not have a zoning ordinance</p> <p>Solution: The establishment of a zoning ordinance will ensure that future developments are up-to-standard and have minimal risks during hazard events and will allow for regulations that development permits are not given in hazard areas or in the floodplain.</p>	No	No	1 year	Town Board	Low	High	Municipal Budget	High	LP R	PR
2021-T CAROLINE-003	Flood Mitigation Along White Church Road	1,3,5		<p>Problem: The hamlet of Brooktondale along White Church road continues to experience extreme stream overflow and flooding due to the merging and</p>	No	No	1 year	Town/SWCD	High	High	HMGP, BRIC, Community Facilities	Medium	SIP	SP



Table 9.2-19. 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
			Flood, Severe Storms	<p>intersection of multiple major ditches and streams.</p> <p>Solution: Initiate an engineering feasibility study to determine best alternative to mitigation streambank erosion, including alternatives such as reinforcement of existing streambank or installation of permeable riparian buffers that can mitigate flooding/ stream overflow.</p>							Direct Loan & Grant Program			
2021-T CAROLINE-004	Canaan Road Outreach	1,3,5	Flood, Severe Storm	<p>Problem: Properties along Canaan Road experience ground water flooding on private property</p> <p>Solution: Conduct outreach to community/ property owners located along Canaan Road and assess the property owners' current needs and damaged experienced due to ground water flooding. Once priority properties have been determined, consider relocation and or structural reinforcements to divert ground water from property.</p>	No	No	1 year	Town Conservation Board	Low	High	Municipal Budget, FMA	High	EAP	PI
2021-T CAROLINE-005	Living Snow Fence	1,3,5	Severe Snow Storms	<p>Problem: Major routes that through the town, specifically State Route 79 is especially prone to snow drifts due to the flat and lack of vegetative surrounding geographical characteristics.</p> <p>Solution: Install permanent vegetative barriers to decrease the wind strength and protect roads from potential snow drifts and whiteouts.</p>	No	No	Medium	Town DPW	Medium	High	Town Budget; BRIC	High	SIP	SP



Table 9.2-19. 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
2021-T CAROLINE-006	Backup Water Supply Development	1,3,5	Severe Storm, Drought	Problem: The town of Caroline does not have municipal water and thus is vulnerable to unreliable water supply based on geography.	No	No	Medium	Town Planning	Low	High	Town Budget, FEMA HMGP, WQIP, Assistance to Firefighters Grant Program	Medium	SIP	SP
				Solution: Designate emergency water supply hub that can be used in case of water contamination and or reduced well capacity.										
2021-T CAROLINE-007	Power Utility Assessment	All Goals	All Hazards	Problem: The Town of Caroline experiences frequent power outages due to utility line failure, especially those located in rural areas of the town	No	No	1 year	Town/NYSEG	Medium	Medium	Town Budget, FEMA HMGP, NYSERD A CEC, CSC Grant Program	High	LPR	PR
				Solution: The town of Caroline should conduct assessment of specific properties that are prone to power outages and the power lines that are located within the region. If no definite solution is determined based on assessment, conduct outreach to community members to discuss potential backup power installation that can be used during extreme weather event.										
2021-T CAROLINE-008	Repetitive Loss Property Outreach	1,2,3	Flood, Severe Storm	Problem: There are 4 NFIP repetitive loss properties in the community. Solution: Conduct outreach to flood-prone property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner	No	No	1 year	Town Board	Low	Medium	Town Budget	Medium	EAP	PR



Table 9.2-19. 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
				information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the areas that experience frequent flooding.										
2021-T CAROLINE-009	Town DPW Flood Mitigation	1	Flood	<p>Problem: The Town DPW is located in a 1 % chance flood zone.</p> <p>Solution: Conduct assessment of existing facility and consider retrofitting/ elevating existing structures that are prone to flooding. Alternatively consider applying for FEMA funding for acquisition and relocation/ reconstruction of facility in a non-flood zone.</p>	Yes	No	1 year	Town DPW	High	High	Town DPW Budget, HMA, FMA, HMGP, BRIC	High	SIP	SP
2021-T CAROLINE-010	South Road Culvert Upgrading	1,3,5	Flood, Severe Storm	<p>Problem: The existing 60" steel culvert crosses below South Road on a skew and is approximately 60.5' long. The culvert was installed 25 ago. An inlet headwall is made up of modular concrete blocks that have settled and become unstable. See photo log and site plan attached. The outlet end of the culvert has eroded the stream bed such that the culvert invert is approximately 8' above the creek bottom. The outlet end of the culvert has also been undermined, jeopardizing the stability of the road. Approximately at mid span within the culvert, directly under the road, the culvert</p>	No	No	2 years	Town DPW	High	High	Municipal DPW Budget, BRIC, Climate Smart Communities Program	High	SIP	SP



Table 9.2-19. 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
				<p>has become deformed and is starting to fail. A hole in the culvert has formed such that aggregate has been exposed.</p> <p>Solution: Based on these assumptions stated above the 60" culvert appears to be undersized when considering additional flows from the south. Until further investigation can be performed, culvert may be exceeded for events greater than the 50-year, 24- hour storm. Based on the information obtained and the existing conditions observed we recommend the culvert be upsized and possibly realigned to address entry and exit conditions. There is significant grade change between the inlet and outlet end of the culvert that would also need to be addressed during replacement. From the road to creek invert at the outlet end there is approximately 21' change in elevation which makes maintaining the culvert difficult by Town Highway staff. To mitigate the 8' fall at the outlet end, a grade control structure, such as a concrete retaining wall or stepped extra-heavy stone wall will be required.</p>										

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
PDM	Pre-Disaster 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



Table 9.2-20. 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	Total	High / Medium / Low
2021-T CAROLINE-001	Ground Water Study	1	1	1	1	0	0	-1	0	0	0	0	1	1	1	6	Medium
2021-T CAROLINE-002	Adopt Zoning Ordinance	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2021-T CAROLINE-003	Flood Mitigation Along White Church Road	1	1	1	1	0	0	-1	1	0	0	0	0	1	1	6	Medium
2021-T CAROLINE-004	Canaan Road Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-T CAROLINE-005	Living Snow Fence	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T CAROLINE-006	Backup Water Supply Development	1	1	1	1	0	0	0	0	0	0	1	1	1	1	8	Medium
2021-T CAROLINE-007	Power Utility Assessment	1	1	1	1	1	-1	0	1	1	1	1	1	1	1	11	High
2021-T CAROLINE-008	Repetitive Loss Property Outreach	1	1	1	0	1	0	0	0	1	0	1	0	1	1	8	Medium
2021-T CAROLINE-009	Town DPW Flood Mitigation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T CAROLINE-010	South Road Culvert Upgrading	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.2.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.2-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Drought	001; 002; 007	006			002; 007			001	006	
Extreme Temperature	002; 007				002; 007					
Flood	001; 002; 007	003; 009; 010		004; 008	002; 007; 008		004	001	003; 009; 010	
Harmful Algal Bloom	002; 007				002; 007					
Invasive Species	002; 007				002; 007					
Severe Storm	002; 007	003; 006; 010		004; 008	002; 007; 008		004		003; 006; 010	
Severe Winter Storm	002; 005; 007				002; 007				005	
Wildfire	002; 007				002; 007					

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.2.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Caroline followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Town Highway, Town Code Enforcement, Supervisor, and Town Clerk. The Supervisor, Mark Witmer represented the community on the Town of Caroline 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.

Additional documentation on the Town of Caroline's planning process through Planning Partnership meetings is included in Section 3 (Planning Process).

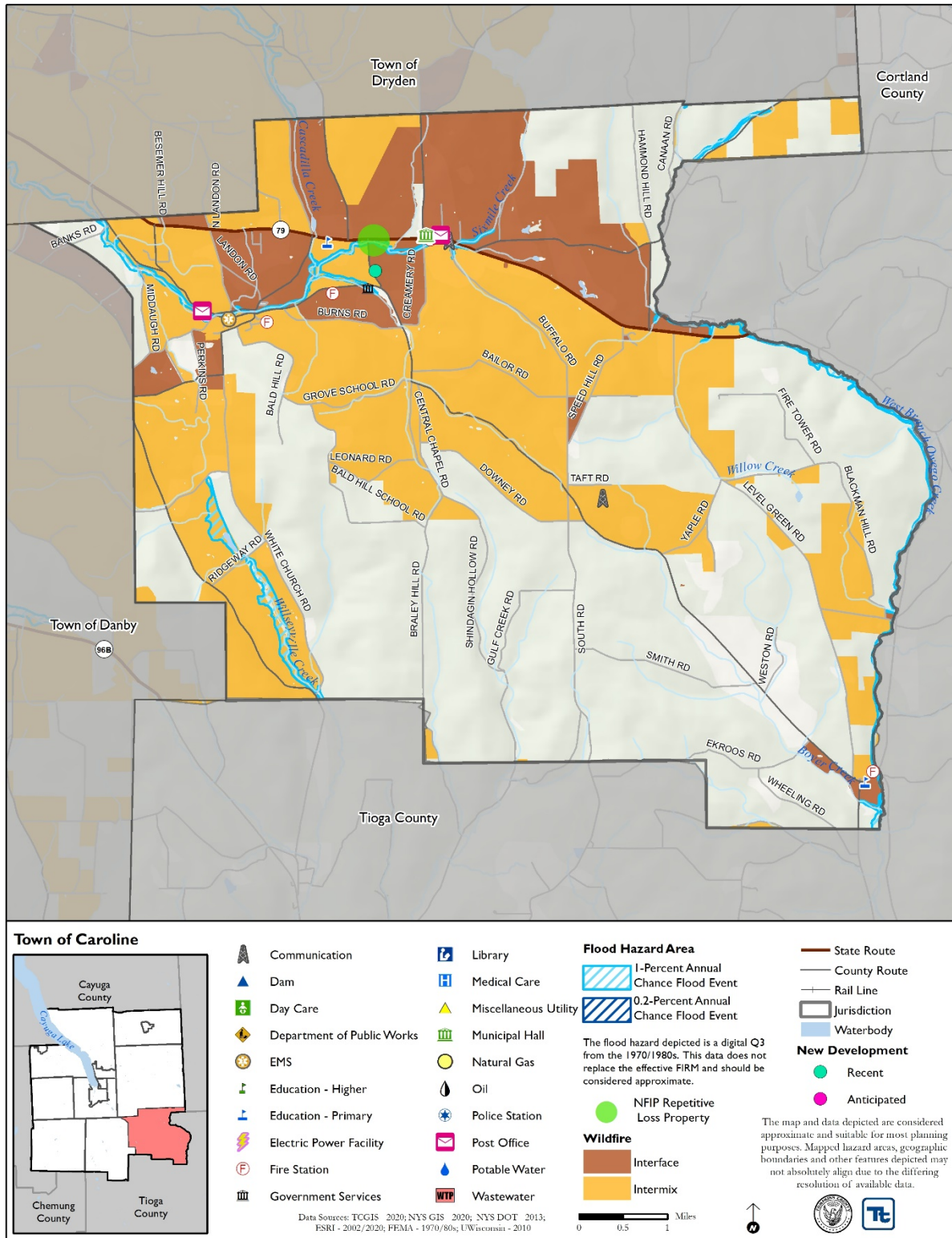


9.2.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Caroline that illustrates the probable areas impacted within the Town of Caroline. This map is based on the best available data at the time of the preparation of this plan, and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Caroline has significant exposure. The map is illustrated below.



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



Action Worksheet			
Project Name:	Highway Facilities Modernization		
Project Number:	2021-T CAROLINE-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood Severe Storm		
Description of the Problem:	The Highway Garage is 50 years old and in need of repair. Additionally, a portion of the property near a creek is in 500-year flood plain and the facility needs backup power upgrades. While the facility does have a backup generator, it is old and below capacity.		
Action or Project Intended for Implementation			
Description of the Solution:	Currently, the Town does not have a specific solution to the highway facility modernization process. Thus the Town proposes to develop a replacement plan that best utilizes current property and assets, mitigates flood vulnerability, and qualifies for grant funds. This will also need to consider projected climate change, population trends and service demand, and new technology that can optimize DPW operations. Phase 2 of the project would be to execute the plan.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No
Is the critical facility located in the 1% annual chance flood area?		Yes <input checked="" type="checkbox"/>	No
(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:	High	Estimated Benefits (losses avoided):	Maintenance costs reduced, enhanced care and management of highway EQ.
Useful Life:	50 years	Goals Met:	Enhanced maintenance and safety
Estimated Cost:	1.5M – Total cost incl project itself.	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Town DPW Budget, FMA, HMGP, BRIC
Responsible Organization:	Caroline Town Board	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Relocate	2.5M	Same benefits, but more expensive



	Highway Facility Modernization	1.5 M	Most economically feasible option with similar benefits as relocation.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Highway Facilities Modernization	
Project Number:	2021-T CAROLINE-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority	High	



Action Worksheet			
Project Name:	South Road Culvert Upgrading		
Project Number:	2021-T CAROLINE-010		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	<p>The existing 60" steel culvert crosses below South Road on a skew and is approximately 60.5' long. The culvert was installed 25 ago. An inlet headwall is made up of modular concrete blocks that have settled and become unstable. See photo log and site plan attached. The outlet end of the culvert has eroded the stream bed such that the culvert invert is approximately 8' above the creek bottom. The outlet end of the culvert has also been undermined, jeopardizing the stability of the road. Approximately at mid span within the culvert, directly under the road, the culvert has become deformed and is starting to fail. A hole in the culvert has formed such that aggregate has been exposed.</p> <p>South Road is a well-traveled road used by local commuters and truck traffic traveling to surrounding Town and Cities as well as truck traffic. Camp MacCormick Secure Center, operated by the Office of Children and Family Services is located approximately 0.2 miles north of the site on South Road. Camp MacCormick is considered a critical facility and it is important to maintain emergency access. If the South Road culvert fails the detour would be approximately 11.1 miles. See detour map attached.</p> <p>The existing conditions observed are vulnerable to structural and hydraulic failure. The inlet headwall is unstable and could collapse, obstructing the culvert inlet directing flow south to the 15" culvert and eventually overtopping the roadway. Due to the significant grade change on the west side of the road (20'-30' at approximately 2:1 slope) flows that overtop the road will cause significant erosion of the embankment and potentially lead to road failure. The road shoulder near the outlet end has already become unstable and is susceptible to road failure as evidenced the photos attached.</p>		
Action or Project Intended for Implementation			
Description of the Solution:	<p>Based on these assumptions stated above the 60" culvert appears to be undersized when considering additional flows from the south. Until further investigation can be performed, culvert may be exceeded for events greater than the 50-year, 24- hour storm. Based on the information obtained and the existing conditions observed we recommend the culvert be upsized and possibly realigned to address entry and exit conditions. There is significant grade change between the inlet and outlet end of the culvert that would also need to be addressed during replacement. From the road to creek invert at the outlet end there is approximately 21' change in elevation which makes maintaining the culvert difficult by Town Highway staff. To mitigate the 8' fall at the outlet end, a grade control structure, such as a concrete retaining wall or stepped extra-heavy stone wall will be required.</p>		
Is this project related to a Critical Facility?		Yes	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes	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:	High	Estimated Benefits (losses avoided):	Reduce erosion and sediment backup along candor road.



Useful Life:	50 years	Goals Met:	1,3,5
Estimated Cost:	High	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	high	Desired Timeframe for Implementation:	Within 6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Municipal DPW Budget, BRIC, Climate Smart Communities Program
Responsible Organization:	Caroline Town Board	Local Planning Mechanisms to be Used in Implementation if any:	NA
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0 and potential property damage	Current problem continues
	Road Elevation and Retrofitting	High	Problem is prevented along road, but stream and ditch will continue to erode.
	South Road Culvert Upgrading	High	Road will stop flooding and erosion will be prevented
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	South Road Culvert Upgrading	
Project Number:	2021-T CAROLINE-010	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority	High	



9.3 Village of Cayuga Heights

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

9.3.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Cayuga Heights’s hazard mitigation plan primary and alternate points of contact.

Table 9.3-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Brent Cross, Village Engineer Address: 836 Hanshaw Road Ithaca, NY 14850 Phone Number: (607) 257-5536 Email: bcross@cayuga-heights.ny.us	Name/Title: Jerry Wright, Police Chief Address: 836 Hanshaw Road Ithaca, NY 14850 Phone Number (607) 257-1011 Email: jwright@cayuga-heights.ny.us
NFIP Floodplain Administrator	
Name/Title: Brent Cross Address: 836 Hanshaw Road Ithaca, NY 14850 Phone Number: (607) 257-5536 Email: bcross@cayuga-heights.ny.us	

9.3.2 Municipal Profile

The Village of Cayuga Heights is one of 5 villages in Tompkins County, New York. It is located within the Town of Ithaca, bordered on the South by the City of Ithaca, and to the North by the Village of Lansing. Cayuga Heights overlooks Cornell University and Cayuga Lake. The Village encompasses 1.77 square miles, consisting mostly of single-family residences. Twenty percent of the Village’s area is classified as vegetative cover. New York State Route 13 crosses the Village’s northwest corner. The land is mostly steep hills and gorges and contains two Unique Natural Area (UNA) sites. A small portion of the Village, the Cornell Heights District, is designated on the National Register of Historic Districts.

The Village of Cayuga Heights was founded in 1901, and the first Village streets and neighborhoods were laid out between the 1900s and 1930s. Officially incorporated in 1915, it was designed as a residential neighborhood to serve the businesses of Ithaca and Cornell University families. In the 1950s, the Village



established its own wastewater treatment plant, and since has maintained independent sewer and public services (road maintenance, snow plowing, fire, and police departments) from the Town of Ithaca.

A defining Village element, the Community Corners commercial district, was developed in the 1940s and provides a variety of retail shopping opportunities, including a gas station and convenience store as well as office buildings. There is an intentional lack of industrial development in the Village.

Cayuga Heights is governed by an elected Mayor, and a six-person Board of Trustees. The Mayor oversees the Village staff, made up of the Clerk and Deputy Clerk, the Treasurer, the Superintendent and Assistant Superintendent of Public Works, eight Public Works Department employees, the Fire Chief, the Chief of Police and fourteen full- and part-time Police officers, and two Police Clerks. Mayoral and trustee positions are filled for two-year terms with Village elections held in March annually. Three of the six trustees are elected each year. Village staff and board and commission memberships are mayoral appointments approved by the Board of Trustees and or civil servants.

According to 2014-2018 American Community Survey, the Village of Cayuga Heights has a population of 3,674.

9.3.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.3-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.3-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.3-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	0	NA	1	NA	0	NA	1	NA	1	NA
Multi-Family	0	NA	0	NA	0	NA	0	NA	0	NA
Other (commercial, mixed-use, etc.)	0	NA	0	NA	0	NA	0	NA	0	NA
Total	0	NA	1	NA	0	NA	1	NA	1	NA
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 2014 to Present										



Type of Development	2014	2015	2016	2017	2018
Kendall Extension	Senior Dwellings/ Office space	1	2230 North Triphammer Rd.	No	Completed 2018
Cayuga Medical Office Building	Medical Facility	1	905 Hanshaw Road	No	Completed, 2018-19
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Upland Estates	mixed use development	3	Upland Road	No	Planning Phase
Wastewater Treatment Upgrade and raise	Municipal Works	1	951 East Shore Drive	No	Under Construction. Phase 1 will end in 2020, Phase II 2021
Safe Routes to School Project	Municipal Works	1	Klein Road to Highschool	No	Anticipated Construction 2021
Culvert Rightsizing	Municipal Works	Multiple	Various Locations along Cayuga Heights Road		Construction in 2021

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified. The Village has no mapped Floodplains within the municipal boundaries.

9.3.4 Capability Assessment

The Village of Cayuga Heights performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community’s adaptive capacity for the impacts of climate change.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan



integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.3.4). The Village of Cayuga Heights identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.3.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.3-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<p>Comments: <i>NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i></p>					
Zoning Code	Yes	2018	Local	Local Zoning Board of Adjustment	No
<p>Comment: <i>Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level</i></p> <ul style="list-style-type: none"> <i>Chapter 305, Zoning, adopted by the Board of Trustees on 02-06-2018. The intent of this Local Law is to promote and protect the public health, safety, and general welfare in the Village of Cayuga Heights pursuant to the laws of the State of New York and the Village's Comprehensive Plan by classifying and regulating the uses of land and structures within the Village so as to preserve the natural, architectural, cultural, historic, and scenic resources that make the Village a distinctive residential community while also accommodating change.</i> <i>Other purposes include, to; • Secure safety from fire and other dangers • Facilitate the adequate provision of transportation, water, sewage disposal, schools, parks, and other public amenities • Provide standards for orderly development • Ensure compatibility between land uses and protect existing land uses from intrusions by inharmonious or harmful land uses • Prevent the overcrowding of land and undue concentration of population.</i> <i>Where slopes are greater than or equal to fifteen percent (15%) for a minimum run of thirty (30) horizontal feet and a minimum area of five hundred (500) square feet not contained within a riparian buffer, no area with such slope may be developed without site plan approval by the Village's Planning Board in accordance with the procedures set forth in Article 17, which site plan review shall consider whether environmental concerns, including but not limited to soil erosion, sedimentation of waterbodies, increased storm water runoff and flooding potential, and degradation of wildlife habitat, have been adequately addressed and that the disturbance of the steep slope area is necessary for the proposed development.</i> <i>No site plan shall be approved by the Village's Planning Board which provides for construction or other disturbance of land in environmentally sensitive areas, including but not limited to, wetlands, watercourses, steep slopes, unique natural areas, or rare plant or animal habitats, unless the applicant demonstrates with professional evidence reasonably satisfactory to the Planning Board that such construction may occur without significant adverse environmental effects upon such areas.</i> 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<ul style="list-style-type: none"> A vegetative riparian or streamside buffer shall be required for all development activities that occur in proximity to intermittent streams with additional considerations for wetlands and steep slopes. A vegetative riparian or streamside buffer shall be required for all development activities that occur in proximity to intermittent streams with additional considerations for wetlands and steep slopes. <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Included in zoning 2018	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (General city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X, 17-7,8,70	Local	Village Engineer	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department.</p> <ul style="list-style-type: none"> Chapter 235, Stormwater Management, adopted 12-17-2007. This Chapter proposes to achieve the following objectives; A. Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from municipal separate stormwater sewer systems (MS4s), Permit no. GP-02-02 or as amended or revised; B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; C. 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; D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality. E. Minimize the total volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety. The objectives of Part 2 of this Chapter are: A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit no. GP-02-02 or as amended or revised; B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes; and C. To prohibit illicit connections, activities and discharges to the MS4; <p>*</p>					
Post-Disaster Recovery Plan or Regulation	Yes	Comprehensive Emergency Management Plan	Local	Village	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>Comment: 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. *The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.</p>					
Growth Management Regulation	No	-	-		No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a, 2018 zoning regs.	Local	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Village updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Planning Board	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	No	Chapter 147, Flood Damage Prevention	-	Code Enforcement Officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <ul style="list-style-type: none"> Chapter 147, Flood Damage Prevention. The Board of Trustees of the Village of Cayuga Heights finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Village of Cayuga Heights and that such damages may include: destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. It is the purpose of this chapter 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 diver floodwaters or which may increase flood hazards to other lands, and F. Qualify for and maintain participation in the National Flood Insurance Program. The Code Enforcement Officer, hereinafter referred to as the "Local Administrator," is responsible for receiving applications, examining the plans and specifications, and issuing permits for any proposed construction or development. Subdivision review shall ensure that plans are consistent with the need to minimize flood damage within the flood prone area, that all public facilities and utilities are located and constructed to minimize or eliminate flood damage, and adequate drainage is provided to reduce exposure to flood hazards. In passing upon such applications where flooding may be a concern, the Planning Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this local law and; (i) the danger that materials may be swept onto other lands to the injury of others; (ii) the danger to life and property due to flooding or erosion damage; (iii) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner; and (iv) the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage. 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	-	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required. <ul style="list-style-type: none"> See Stormwater Management Regulations, Part 2 above. 					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No	-	-	-	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	Yes	Local Stormwater Management Law	Local	Code Dept.	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a), 2015	Local	Planning Board	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level. <ul style="list-style-type: none"> Village of Cayuga Heights, Comprehensive Plan, adopted 01-13-2014 by the Board of Trustees. The Comprehensive Plan is organized around seven topics identified by the Planning Board as integral to the vitality of the current and future Village and the well-being of its residents: Quality of Life, Community Character, Ecology and Scenic Assets, Economy, Housing, Transportation, and Public Services and Utilities. Plan recommendations include strategies and actions to: Conserve undeveloped open space and environmentally sensitive areas; Safeguard water quality by minimizing stormwater runoff and preserving historic hydrological functions; Develop and implement a plan for the control and management of invasive plants; Manage wildlife species that threaten species diversity and long term landscape ecology; Channel future development from environmentally sensitive undeveloped land to previously developed areas to reduce resource consumption and preserve ecosystems; develop a framework for permanently protecting open spaces adjacent to Renwick Brook and maintaining public access to them; Maintain and upgrade Village fire protection/prevention and police protection as necessary; and Preserve water quality by minimizing urban runoff pollution, erosion and sedimentation, and stormwater discharge. 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*When the Village updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	No	-	-	-	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	-	-	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	Yes	Cayuga Watershed Management Plan	Local	Planning Board Member	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes	As part of MS4 Requirement; 2012	Local	SWCD	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No	-	-	-	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	No	-	-	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No				No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	-	-	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	-	-	No
Comment: Have forest manager and forest committee but no plan in place; have tree regulations within zoning					
Transportation Plan	No	-	-	-	No
Comment:					
Agriculture Plan	No	-	-	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	No	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B, 2015	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	Yes	ERP	Local	-	No
Comment: Comp Emergency Management – Planning Board					
Continuity of Operations Plan	Yes	ERP	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations. Within Emergency Response Plan					
Public Health Plan	Yes	ERP	Local	Health Dept.	Yes
Comment:					
Other: Emergency Response Plan	No	-	-	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					



Table 9.3-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.3.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Cayuga Heights.

Table 9.3-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Police/ Fire: E News blast/ Crime warning listserv (sign up required)
Maintenance programs to reduce risk	Yes	-
Mutual aid agreements	Yes	Fire/ EMS/ Police: CAD System on County level; Part of TC Shared Services for Public Works
Other: Part of the Tompkins County Stormwater Coalition	Yes	Provides public education and outreach
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Village Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Village Engineer
Planners or engineers with an understanding of natural hazards	Yes	Village Engineer
Staff with expertise or training in benefit/cost analysis	Yes	Village Engineer
Professionals trained in conducting damage assessments	Yes	Village Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	DPW
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Fire Dept point of contact as EM to assist Police Dept – title: Emergency Coordinator
Grant writer(s)	Yes	Consultant: Templeton – Michelle Palmer
Resilience Officer	No	



Resources	Available? (Yes or No)	Department/ Agency/Position
Other	No	-

9.3.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Cayuga Heights.

Table 9.3-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	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- (Consolidated Highway Improvement) CHIPS
Open Space Acquisition funding programs	No
Other	No

9.3.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Cayuga Heights.

Table 9.3-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes- Fire Dept – PIO officer
Personnel skilled or trained in website development?	Village Clerk
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes – Eblast and listserv
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes- Public Safety Committee
Warning systems for hazard events; if yes, briefly describe.	Swift 911
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes – police /school educational program/ plan in place
Other: Part of the Tompkins County Stormwater Coalition	Provides public education and outreach materials.



9.3.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Cayuga Heights.

Table 9.3-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	-	2017
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Class 3	Jan 2017
NYSDEC Climate Smart Community	Yes	Designated	2018
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.3.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.3-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	High
Drought	High
Extreme Temperature	High
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	High

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement



9.3.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Name/Title: Brent Cross
Address: 836 Hanshaw Road Ithaca, NY 14850
Phone Number: (607) 257-5536
Email: bcross@cayuga-heights.ny.us

Table 9.3-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	No
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Based on input from resident and visible structural damage
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	No
Resources	
What local department is responsible for floodplain management?	Public Works
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes – Financial Assistance!



NFIP Topic	Comments
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	NA – Village located in Zone C
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	NA
What are the barriers to running an effective NFIP program in the community, if any?	NA
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Never
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	None, the village does not have any flood zones.
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets minimum
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 does consider flood risk during site plan review
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No – would be interested

9.3.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Cayuga Heights.

Table 9.3-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Village of Cayuga Heights	7	5	\$6,588.85	0	-

Source: FEMA 2020



Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL=Repetitive Loss; SRL=Severe Repetitive Loss

9.3.4.9 Additional Areas of Existing Integration

- The municipality prohibits construction of structures within the 100-year floodplain.
- The municipality continues to support retrofitting or relocation of structures located within hazard-prone areas to protect from future damages.
- The municipality maintains compliance and good standing with the NFIP.
- The municipality works to maintain high regulatory standards to manage flood risk in accordance with NYS freeboard requirements.
- The municipality maintains mutual aid agreements with neighboring communities.
- The municipality maintains well and infrastructure elevations to meet current code requirements
- The municipality has a program to remove dangerous trees and promote planting healthy trees, and street tree programs as part of the Community Forest Management Plan
- The municipality works along with County and regional agencies to conduct damage assessments, and with entities that support FEMA/NYSDHSES paperwork after disasters.
- The municipality continues to develop, enhance, and implement existing emergency plans.
- The municipality supports all county-wide and municipal initiatives identified in the HMP.

9.3.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Village has identified the following routes to be used in the event of evacuation of the Town.

- North Triphammer Rd.
- Cayuga Heights Rd.

However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Village will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.



Sheltering

The Village has indicated the following as an emergency shelter. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

- Cayuga Heights Elementary School

Table 9.3-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Cayuga Heights Elementary School	110 E Upland Rd, Ithaca, NY 14850	500	No	Yes	Yes	None	None

Temporary Housing

The Town has identified the following unofficial/unconfirmed site for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired in the event temporary housing is needed.

Table 9.3-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Kendall Grounds/ Parking Lot	2230 N Triphammer Rd	All	One	Open field/ Parking Lot	Unsure

Permanent Housing

While the Village did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Village can utilize this analysis to identify potential locations.

Table 9.3-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with
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(water, electric, septic, etc.)	the NYS Uniform Fire Prevention and Building Code
Please refer to the County-wide buildable land inventory in Volume 1, Section 4 (County Profile) of this plan.	

9.3.5 Hazard Event History Specific to the Village of Cayuga Heights

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Cayuga Heights’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.3-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.3-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools, and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	While this event impacted the community, due to lack of resources damage history has not been documented



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	While this event impacted the community, due to lack of resources damage history has not been documented
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		While this event impacted the community, due to lack of resources damage history has not been documented

Notes:

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

9.3.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Village of Cayuga Heights’s risk assessment results and data used to determine the hazard ranking.

9.3.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).



According to HAZUS there are no critical facilities located in hazard zones.

Table 9.3-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No facilities identified				

Source: 2020 GIS

9.3.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each municipality 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 Cayuga Heights. The Village of Cayuga Heights has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Cayuga Heights indicated the following:

- In general, the area does not have any major issues around natural hazards.
- While flood and severe storms are ranked high, it is notable that the Village has adequate resources for emergency response.

Table 9.3-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High*
Severe Winter Storm	High
Wildfire	Medium



Note: The scale is based on the following hazard rankings as established in Section 5.3.

*The Village changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Village of Cayuga Heights.

9.3.6.3 Identified Issues

The Village of Cayuga Heights has identified the following vulnerabilities within their community:

- The Village is fortunate to not have any major hazards of concern. However the Village would like to note of the steep hillside going down towards Cayuga Lake and the Ithaca High School and the erosion occurring from flooding and winter storms.
- The impact of increase in heavy rain events on local drainage systems are an increasing concern. These structures can often be overwhelmed now after heavy rainstorms and flood driveways and basements because street drainage is in adequate. This is made worse when inadequate drainage is not required with new developments and increase in hard scape causes water run off rather than absorption. This ultimately impacts water quality in the Lake.

No information or feedback was provided through the citizen survey for the village of Cayuga Heights.

9.3.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.3.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.3-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
CH1		Flash Flood	Village of Cayuga Heights	Develop strategy for mitigating drainage concerns at Winthrop Drive and Triphammer Road	Have been unsuccessful in getting landowners to participate	-	-	Discontinued; there is no way to pursue due to disagreement between landowners.
						Damages Avoided; Evidence of Success	-	



9.3.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Cayuga Heights has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- The Village has been pursuing to become a Climate Smart Community.
- The Village has replaced various culverts to decrease flooding.
- The Village has continued to upgrade technology and infrastructure to increase overall resilience.

9.3.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Cayuga Heights participated in a mitigation action workshop in 2020 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: ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.3-19 summarizes the comprehensive range of specific mitigation initiatives the Village of Cayuga Heights would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.3-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.3-19. 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
2021-V CAYUGA HEIGHTS -001	Winter Road Hazard Reduction	1, 5	Severe Winter Storms	<p>Problem: The Village is vulnerable to snow events that can impact traffic due to the hilly nature of the municipality.</p> <p>Solution: Conduct a feasibility study to determine how best to reduce overall snow accumulation on steep slopes, and work collaboratively with reducing vegetative cover on steep slope roads and work with the Cornell Local Roads Program to explore potential options to reduce overall snow accumulation on steep slope.</p>	No	No	Medium	Village DPW	Medium	High	Municipal Public Works Budget	High	SIP	SP
2021-V CAYUGA HEIGHTS -002	Emergency Shelter Designation	All Goals	All Hazards	<p>Problem: The Village does not have any designated emergency shelter or temporary housing locations. Current Kendall Senior Housing has been identified as a potential facility for temporary housing, though no discussion or official designation has been made.</p> <p>Solution: The first step would be to identify facilities that could potentially be designated as temporary housing locations. These facilities need to have open space and or a parking lot that has access to backup power if needed. If backup power or essential utilities are lacking, the village would need to develop site to be equipped with necessary equipment and utilities. While the Kendall Senior Facility was previously identified as it has one of</p>	No	No	Long	Village	High	High	Municipal Budget, HMGP	High	SIP	SP



Table 9.3-19. 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
				the largest open space footprints in the village, further discussion and assessment would need to be conducted, and a negotiation would need to be had between the senior facility and the village.										
2021-V CAYUGA HEIGHTS -003	NFIP repetitive flood property outreach	1	Flood	<p>Problem: There are 2 NFIP repetitive loss properties in the community.</p> <p>Solution: Conduct outreach to flood-prone property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information, and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the areas that experience frequent flooding.</p>	No	No	Medium	Village	Low	High	FMA, HMGP, Municipal Budget	High	EAP	PP
2021-V CAYUGA HEIGHTS -004	HABs partnership program action plan	2,4	HABs	<p>Problem: Cayuga Lake has elevated cases of harmful algal bloom.</p> <p>Solution: While the Village of Cayuga Heights has minimal exposure to the lake, many of its residents move between municipalities and use Cayuga Lake as a recreational facility. Collaborate with neighboring municipalities also along Cayuga Lake such as through the intermunicipal organization to create a Tompkins County-specific response plan to address increasing levels of Harmful Algal Bloom.</p>	No	No	Long	Village with Other municipalities	Low	High	County Funding, Cornell Cooperative Extension and NYSDEC	High	LPR	PR



Table 9.3-19. 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
2021-V CAYUGA HEIGHTS -005	Climate Smart Communities Certification	All Goals	All Hazards	<p>Problem: The Village of Cayuga Heights is not a certified Climate Smart Community, while many of the surrounding municipalities like the Town of Dryden, Lansing, Ithaca, and Caroline are all designated.</p> <p>Solution: As a designated Climate Smart Community, local governments work to improve community health and safety in the wake of climate change. Many actions under this program are congruent with mitigation goals in the HMP, such as improving regulatory standards to reduce the impacts of flooding and extreme precipitation exacerbated by climate change. Specifically, Element PE7: Enhance community resilience to climate change supports HMP goals such as preserving natural (hazard) areas, performing a vulnerability assessment, and adopting smart growth principles. The Village will work with the Cornell Cooperative Extension, Tompkins County office to work on becoming a bronze climate smart community. This is the first certification in which a community needs at least 120 points based on previous mitigation, climate adaptation, and GHG reduction action completed by the community.</p>	No	No	Medium	Village	Low	High	Municipal Budget, Climate Smart Communities Grant Program.	High	LPR	PR



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
PDM	Pre-Disaster 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*



Table 9.3-20. 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	Total	High / Medium / Low
2021-V CAYUGA HEIGHTS-001	Winter Road Hazard Reduction	1	1	1	1	1	0	-1	1	1	1	1	1	1	1	11	High
2021-V CAYUGA HEIGHTS-002	Emergency Shelter Designation	1	1	1	1	1	-1	-1	1	1	0	1	1	1	1	9	High
2021-V CAYUGA HEIGHTS-003	NFIP repetitive flood property outreach	1	1	1	0	1	1	1	1	1	1	1	1	1	1	13	High
2021-V CAYUGA HEIGHTS-004	HABs partnership program action plan	1	1	1	0	1	1	1	1	1	0	0	1	1	1	11	High
2021-V CAYUGA HEIGHTS-005	Climate Smart Communities Certification	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.3.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.3-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak	005	002			005				002	
Drought	005	002			005				002	
Extreme Temperature	005	002			005				002	
Flood	005	002		003	005	003			002	
Harmful Algal Bloom	004; 005	002			004; 005				002	
Invasive Species	005	002			005				002	
Severe Storm	005	002			005				002	
Severe Winter Storm	005	001; 002			005				001; 002	
Wildfire	005	002			005				002	

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.3.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Cayuga Heights followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Village Engineer, Fire Department, and Police Department. The Village Engineer represented the community on the Village of Cayuga Heights 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.

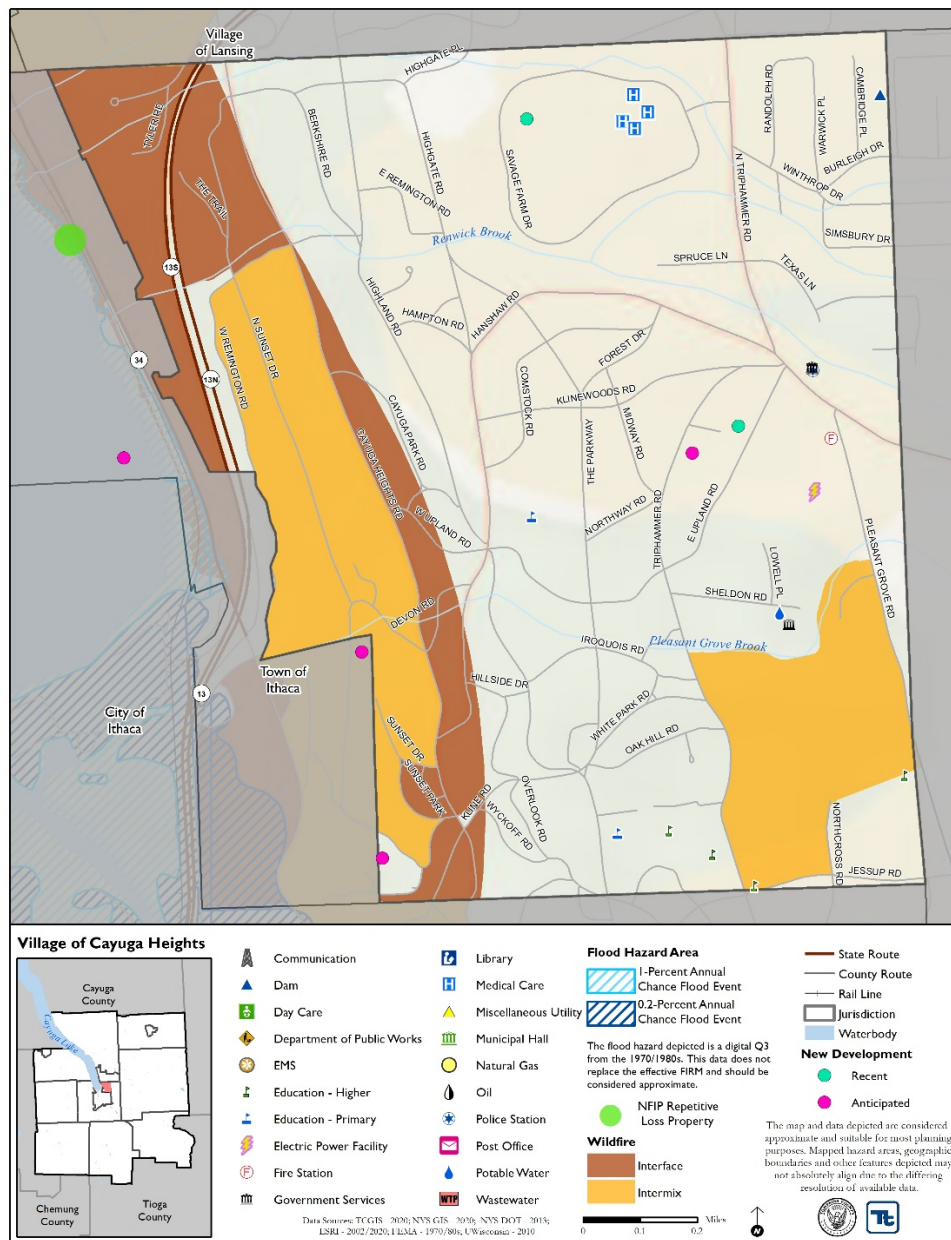
Additional documentation on the Village of Cayuga Heights’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).



9.3.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Cayuga Heights that illustrates the probable areas impacted within the Village of Cayuga Heights. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Cayuga Heights has significant exposure. The map is illustrated below.

Figure 9.3-1. Village of Cayuga Heights Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Winter Road Hazard Reduction Plan		
Project Number:	2021-V CAYUGA HEIGHTS-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Winter Storms.		
Description of the Problem:	The Village is vulnerable to snow events that can impact traffic due to the hilly nature of the municipality. Many of the roads are narrow and are hazardous during the winter, especially for commuters between Cayuga Heights and the City of Ithaca.		
Action or Project Intended for Implementation			
Description of the Solution:	Work with the soil and water conservation district and the Cornell Local Roads program to develop an action plan to increase safety along steep roads like Klein Road and Wyckoff Drive to reduce erosion and icy road conditions during the winter.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	Snow and ice accumulation reduction; flood reduction.	Estimated Benefits (losses avoided):	Traffic Accidents, winter flooding, erosion.
Useful Life:	30 years	Goals Met:	1,5
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Municipal Public Works Budget
Responsible Organization:	Village/ SWCD	Local Planning Mechanisms to be Used in Implementation if any:	Zoning; Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Road elimination.	High	Would have to buy out all properties along steep roads and access route would be eliminated, though hazards will be reduced.
	Winter Road Hazard Reduction	Medium	Best alternative
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
--	--

Action Worksheet		
Project Name:	Winter Road Hazard Reduction Plan	
Project Number:	2021-V CAYUGA HEIGHTS-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This protects life and property
Property Protection	1	This protects life and property
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	The technical expertise is available
Political	1	There is no political opposition
Legal	0	There might be some legal complications with landowners
Fiscal	-1	The project needs funding
Environmental	1	This project has a positive environmental impact
Social	1	This project has a positive social impact
Administrative	1	This project is supported by the administration
Multi-Hazard	1	This project does address multiple types of hazards
Timeline	1	This project has a reasonable timeline
Agency Champion	1	This project is supported by village agency
Other Community Objectives	1	This project is supported by community agencies
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Emergency Shelter Designation		
Project Number:	2021-V CAYUGA HEIGHTS-002		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Village does not have any designated emergency shelter or temporary housing locations. Current Kendall Senior Housing has been identified as a potential facility for temporary housing, though no discussion or official designation has been made.		
Action or Project Intended for Implementation			
Description of the Solution:	Identify facilities that could potentially be designated as temporary housing locations. These facilities need to have open space and or a parking lot that has access to backup power if needed. If backup power or essential utilities are lacking, the village would need to develop site to be equipped with necessary equipment and utilities. While the Kendall Senior Facility was previously identified as it has one of the largest open space footprints in the village, further discussion and assessment would need to be conducted, and a negotiation would need to be had between the senior facility and the village.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year flood	Estimated Benefits (losses avoided):	Have designated emergency facility
Useful Life:	50 years	Goals Met:	All Goals
Estimated Cost:	High	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Municipal Budget, HMGP
Responsible Organization:	Village and landowners	Local Planning Mechanisms to be Used in Implementation if any:	Zoning; Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Share an emergency shelter facility with a neighboring municipality.	Medium	Will have designated emergency shelter but would be further away.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Emergency Shelter Designation	
Project Number:	2021-V CAYUGA HEIGHTS-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This protects life and property
Property Protection	1	This protects life and property
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	The technical expertise is available
Political	1	There is no political opposition
Legal	-1	There might be some legal complications with landowners
Fiscal	-1	The project needs funding
Environmental	1	This project has a positive environmental impact
Social	1	This project has a positive social impact
Administrative	0	This project has not yet confirmed administrative support
Multi-Hazard	1	This project does address multiple types of hazards
Timeline	1	This project has a reasonable timeline
Agency Champion	1	This project is supported by village agency
Other Community Objectives	1	This project is supported by community agencies
Total	9	
Priority (High/Med/Low)	High	



9.4 Town of Danby

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

9.4.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Danby’s hazard mitigation plan primary and alternate points of contact.

Table 9.4-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Steve Cortright, Code Enforcement Officer Address: 1830 Danby Rd., Ithaca, NY 14850 Phone Number: 607-277-0799 Email: code@townofdanbyny.org	Name/Title: Matt Ulinski, Town Councilperson/Deputy Supervisor Address: 1830 Danby Rd., Ithaca, NY 14850 Phone Number: 607-272-2906 Email: mulinski@townofdanbyny.org
NFIP Floodplain Administrator	
Name/Title: Steve Cortright, Code Enforcement Officer Address: 1830 Danby Rd., Ithaca, NY 14850 Phone Number: 607-277-0799 Email: code@townofdanbyny.org	

9.4.2 Municipal Profile

The Town of Danby is a rural town spread out among the highlands south of Cayuga Lake in the Finger Lakes Region of New York. Danby is part of the greater Ithaca urban area, located in the center of southern Tompkins County. Bordered on the north by the Town of Ithaca and on the east by the Town of Caroline, Danby encompasses 53.6 square miles. The Town includes two unincorporated hamlets, West Danby and Central Danby. State Route 96B (Danby Road) and Route 34/96 (Spencer Road) pass through the town. Buttermilk Creek runs north through the center of Danby, flowing to the gorge and falls in Buttermilk Falls State Park. The Cayuga Inlet also runs north through the western part of the town towards Cayuga Lake. Several wetlands are located within Danby, along with 11 designated Unique Natural Areas (UNAs).

First settled in the late 18th century, Danby was dominated by agriculture including small-scale subsistence farming, cattle and sheep grazing, and the production of wheat, corn, hay, tobacco, and some fruits and



vegetables. The population grew with the building of the Ithaca-Owego turnpike (now Route 96B) in 1810 and was officially incorporated in 1811 as part of Tioga County. In 1822, Danby was annexed into Tompkins County. Almost all of the town’s commercial development is concentrated along Route 96B, with some additional small-scale light industrial sites located in the northern and central parts of the town. Southern Danby is heavily forested, with one-quarter of the total land area being located within the Danby State Forest.

Danby is governed by a Town Board, consisting of four Council members elected for 4-year terms, and a Supervisor, elected for a 2-year term. The Town Board controls Town finances, budget, and salaries. Members of the Planning Board, Board of Zoning Appeals, and Conservation Advisory Council are appointed by the Town Board.

According to the 2014-2018 American Community Survey, the population for the Town of Danby is 3438.

9.4.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.4-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.4-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.4-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	31	-	14	-	19	-	14	-	10	-
Multi-Family		-		-		-		-		-
Other (commercial, mixed-use, etc.)	25	-	6	-	10	-	15	-	10	-
Total	56	-	20	-	29	-	29	-	20	-
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 2014 to Present										
Gunderman Rd	Upsized culvert	1	65 Gunderman Rd		Flood Zone		Complete 2020			
Troy Rd	Upsized culvert	1	400 block Troy Rd		Flood Zone		Complete 2020			
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Olsefski Rd	Upsized culvert	1	0-100 block		Flood Zone		Anticipated			



Type of Development	2014	2015	2016	2017	2018
Gundermann Rd @Buttermilk creek	Upsized culvert at stream crossing	1	0-100 block	Flood Zone	Anticipated
West Jersey Hill Rd@ Lick Brook	Upsized culvert at stream crossing	1	0-100 block	Flood Zone	Anticipated
Bruce Hill @ stream crossing	Up sized culvert at stream crossing	1	0-100 block	Flood Zone	Anticipated

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

**Information not documented.

9.4.4 Capability Assessment

The Town of Danby performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.4.4). The Town of Danby identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.4.4.1 Planning, Legal, and Regulatory Capability

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



Table 9.4-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<p>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</p>					
Zoning Code	Yes	2017, July	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level</p> <ul style="list-style-type: none"> • Zoning 2017. The purposes of the Zoning Code are to; Promote the health, safety, morals, and general welfare of the community; Lessen the congestion on the highways; Secure safety from fire, panic, and other dangers; Protect the environment; Provide adequate light and air; and Prevent the overcrowding of land, avoid undue concentration of the population, facilitate the adequate provisions of transportation, water, sewage, schools, parks, and other public requirements. • The Code establishes the following Zones: Low Density Residential Zone, Medium Density Residential Zone, High Density Residential Zone, Commercial Target Area, Planned Development Zone, Mobile Home Park Zone, Aquifer High Vulnerability (AHV) Overlay Zone. <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	July 2016	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <ul style="list-style-type: none"> • Subdivision of Land Regulations 2016. These regulations are intended to guide and protect the community's physical, social, and aesthetic development in accordance with the Town of Danby Comprehensive Plan, The regulations, standards, and procedures contained in this Chapter are to ensure; that land to be divided is suitable for building purposes without creating dangers to health or peril from fire, flood, or other menace; that proper provision is made for drainage, water supply, sewerage, highways, open space, and other needed improvements; that development is made in such a manner that it protects and conserves natural, agricultural and historical resources; and that there is optimum overall conservation, protection, and responsible use of the environmental resources of the Town of Danby. • Final Plats must depict the location and required setbacks from waterbodies, Aquifer High Vulnerability (AHV) Overlay Zones, and the 100-year floodplain; and All existing wooded areas, watercourses, slopes of 15% or greater, critical environmental areas, and other significant physical features within the area to be subdivided and within 200 feet of the proposed subdivision's boundaries. • In the Low Density Residential Zone, the following areas shall not be built on or disturbed during site construction, except for no or low impact permitted uses listed in this Chapter: <ul style="list-style-type: none"> 1. Areas of 100-year flooding as defined by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>2. Wetlands, including those shown on the New York State Freshwater Wetlands Maps, and those shown in the National Wetlands Inventory.</p> <p>3. Intermittent and Perennial Streams, including a 50-foot buffer from the stream centerline</p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70- Local Law No. 1 of 2010	Local	SMO	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p> <ul style="list-style-type: none"> Local Law No. 1 of 2010. Stormwater Management, Erosion and Sediment Control enacted by the Town Board. The purpose of this Local Law is to establish minimum Stormwater management requirements and standards, including, as applicable, Land Development Activity and Stormwater Management Practice requirements and standards necessary to minimize potential harm to the environment, to promote public health, welfare, and Page 9 of 29 safety, and to control and minimize the adverse effects associated with Erosion, Sedimentation, unregulated Stormwater, Point Source Pollution, and Nonpoint Source Pollution. This Local Law shall be applicable to all Land Development Activities that exceed any one of the minimum thresholds in this /chapter. No person may undertake a Land Development Activity without first meeting the requirements of this Local Law. The Town Board shall appoint one (or more) Stormwater Management Officer, SMOs to administer, implement, and enforce the provisions of this Local Law. No Land Development Activity subject to this local law shall be commenced until the SMO has approved a SWPPP. All Land Development Activities subject to review and approval by the Town Board or Planning Board under Zoning, Rezoning, Subdivision, Site Plan, and Special Permit laws, rules, ordinances or regulations shall be reviewed subject to the standards contained in this Local Law. It is one of the Objectives of this Chapter to minimize increases in Stormwater Runoff and Erosion generated by Land Development Activities in order to, reduce flooding, reduce siltation, reduce increases in stream temperatures, reduce Erosion, and maintain the integrity of streams and other Watercourse and Waterway channels and Surface Waters. <p>*This addresses localized flooding issues.</p>					
Post-Disaster Recovery Plan or Regulation	No				No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.</p>					
Growth Management Regulation	No			Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a 2020	Local	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	None	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	No	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRA)	Local, State, Federal	Town	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	No	EPA Phase II Stormwater Rule	Federal	None	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					
Climate Adaptation	Yes	NYS Executive Law, Article 75	Local	Town	Yes
<p>Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</p>					
Disaster Recovery Ordinance	No	-	-	-	No
<p>Comment:</p>					
Disaster Reconstruction Ordinance	No	-	-	-	No
<p>Comment:</p>					
Other Applicable Codes, Ordinances, & Requirements	-	-	-	-	-
<p>Comment:</p>					
<p>Planning Documents</p>					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section	Local	Planning	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
		272-a(2)(a); Village Law section 7-722(2)(a), updated 2011			
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level</p> <ul style="list-style-type: none"> Comprehensive Plan 2011. Among the goals of the Comprehensive Plan are that; Danby's natural resources and natural areas are maintained, enhanced, and protected by public and private activities; Agriculture is protected as a potential "steward" of the environment and open space; and Land use practices of the Town seek to preserve natural, agricultural, and historic resources in Danby and the greater community. The Plan recommends designating areas where development should be encouraged and areas where development should be discouraged; Providing incentives and appropriate regulations for clustered development and associated open-space conservation; Protecting water resources from sedimentation, run-off from erosion, drainage, contamination and flooding; and Providing innovative and responsible land use policies enhance both environmental protection and local economic development. In 1991, the Town enacted extensive revisions to the Zoning Ordinance and Zoning Map, adopted new Subdivision Regulations, and approved local laws related to environmental review and flood damage prevention. These actions were intended to implement the goals of the 1989 Comprehensive Plan. Among the Plan's objectives are to Protect water resources from sedimentation, run-off from erosion, drainage, contamination and flooding. To follow through on this objective, the Plan recommends; Enhancing the study of drainage, runoff, and water use in the review of development applications and require drainage planning or improvements and erosion and sedimentation control as needed; Supporting the wetlands protection enforcement efforts of State and Federal agencies; Identifying properties outside the 100-year floodplain that are frequently subject to flooding and develop plans for flood hazard mitigation. Consider applying to FEMA for Project Impact hazard mitigation funding; and prohibiting or discouraging development on erosion-prone steep slopes. <p>*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	NA	No
<p>Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.</p>					
Disaster Debris Management Plan	No		Local	NA	No
<p>Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</p>					
Floodplain or Watershed Plan	Yes	-	Local	-	No
<p>Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</p>					
Stormwater Plan	Yes	Law adopted Feb 2010	Local	-	No
<p>Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</p>					
Open Space Plan	Yes	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)	Local	-	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	No	-	-	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	-	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	County	?	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	-	-	-	-	-
Comment: none					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No		Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	Yes	2020 COVID 19 Plan	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	-
Comment:					
Other:	No	-	-	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.4-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.4.4.2 Administrative and Technical Capability

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

Table 9.4-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		



Resources	Available? (Yes or No)	Department/ Agency/Position
Planning Board	Yes	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Conservation Advisory Committee
Open Space Board/Committee	Yes	Conservation Advisory Committee
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	911 Swift
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Fire Dept./ Highway Dept
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Town Planner
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	Yes	Town Planner
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	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	--
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other	-	-

9.4.4.3 Fiscal Capability

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

Table 9.4-6. 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



Financial Resources	Accessible or Eligible to Use (Yes/No)
Open Space Acquisition funding programs	No
Other	No

9.4.4.4 Education and Outreach Capability

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

Table 9.4-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No - except website
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	

9.4.4.5 Community Classifications

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

Table 9.4-8. 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	ISO rating is 5	2016
NYSDEC Climate Smart Community	Yes	Participating	2016
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other		-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable



9.4.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.4-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

**High Capacity exists and is in use*
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.4.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Name/Title: Steve Cortright, Code Enforcement Officer
 Address: 1830 Danby Rd., Ithaca, NY 14850
 Phone Number: 607-277-0799
 Email: code@townofdanbyny.org

Table 9.4-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	A majority of flooding areas are due the storm runoff. There is very little creek flooding in the town. The last creek flooding was in West Danby the Tupper Rd Maple Ave creek affected 2 houses downstream on Station Rd NO



NFIP Topic	Comments
<p>Do you maintain a list of property owners interested in flood mitigation?</p> <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	<p>No</p> <p>None that I am aware of</p>
<p>Are any RiskMAP projects currently underway in your jurisdiction?</p> <ul style="list-style-type: none"> If so, state what projects are underway. 	<p>No because we have no defined flood zone in the town</p>
<p>How do you make Substantial Damage determinations?</p> <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	<p>By inspection and evaluation</p> <p>1 - 36 Station Rd</p>
<p>How many properties have been mitigated (elevation or acquisition) in your jurisdiction?</p> <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	<p>1 – 10 Maple Ave when being rebuilt after a fire but I believe it was unintentional</p> <p>Fire insurance</p>
<p>Do your flood hazard maps adequately address the flood risk within your jurisdiction?</p> <ul style="list-style-type: none"> If not, state why. 	<p>NO</p> <p>Because we have no flood zones indicated on the FIRM Map</p>
Resources	
<p>What local department is responsible for floodplain management?</p>	<p>Code Enforcement</p>
<p>Are any certified floodplain managers on staff in your jurisdiction?</p>	<p>No</p>
<p>Do you have access to resources to determine possible future flooding conditions from climate change?</p>	<p>No</p>
<p>Does your floodplain management staff need any assistance or training to support its floodplain management program?</p> <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	<p>Yes</p>
<p>Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)</p>	<p>Permit application review and work with property owner to avoid issues down the road</p>
<p>How do you determine if proposed development on an existing structure would qualify as a substantial improvement?</p>	<p>Plan review and property history</p>
<p>What are the barriers to running an effective NFIP program in the community, if any?</p>	<p>Lack of Maps</p>
Compliance History	
<p>Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?</p> <ul style="list-style-type: none"> If so, state the violations. 	<p>Don't know</p>
<p>When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?</p>	<p>Don't Know</p>
Regulatory	



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	unknown
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	unknown
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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No,

9.4.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.4-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Danby	3	0	0	0	0

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss

9.4.4.9 Additional Areas of Existing Integration

- The Town prohibits construction of structures within the 100-year floodplain.
- The Town continues to support retrofitting or relocation of structures located within hazard-prone areas to protect from future damages.
- The Town maintains compliance and good standing with the NFIP.
- The Town works to maintain high regulatory standards to manage flood risk in accordance with NYS freeboard requirements.
- The Town maintains mutual aid agreements with neighboring communities.
- The Town implements best farming and agriculture practices to minimize erosion and other environmental impacts from agriculture land use.



- The Town maintains well and infrastructure elevations to meet current code requirements
- The Town has a program to remove dangerous trees and promote planting healthy trees, and street tree programs as part of the Community Forest Management Plan
- The Town works along with County and regional agencies to conduct damage assessments, and with entities that support FEMA/NYSDHSES paperwork after disasters.
- The Town supports county efforts to assess facilities for earthquake vulnerabilities and with the development of an earthquake management plan.
- The Town continues to develop, enhance, and implement existing emergency plans.
- The Town supports all county-wide and municipal initiatives identified in the HMP.

9.4.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Town has identified the following routes to be used in the event of evacuation of the Town.

- From Danby proper St. Rt. 96B
- From West Danby St. RT 34/96

However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The Town has indicated the following as an emergency shelter. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.4-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
West Danby Fire Station	47 Sylvan Ln. Spencer Ny 14883	12	That would depend on the Red Cross Shelter Manager	Yes	Yes	Basic EMS	Kitchen



Temporary Housing

The Town has identified the following sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired in the event temporary housing is needed.

Table 9.4-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Old Danby School	54 Gunderman Rd	Water, electric, sewer and gas	19 Acres	Old school grounds	Agreement with the ICSD to use
Old Danby Highway Barn property	15 Bald Hill	Water, sewer, electric. and gas	1.26 acres	Vacant town property	-
Danby Community Park	Ithaca Rd	None	92 acres	Wooded park	Agreement with the Park association

Permanent Housing

While the Town did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations.

Table 9.4-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Please refer to the County-wide buildable land inventory in Volume 1, Section 4 (County Profile) of this plan.					

Hazard Event History Specific to the Town of Danby

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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. Tompkins County's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of



Town of Danby. Table 9.4-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.4-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Although the Town was impacted, Town of Danby did not report any damages.
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Although the Town was impacted, Town of Danby did not report any damages
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Although the Town was impacted, Town of Danby did not report any damages
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Although the Town was impacted, Town of Danby did not report any damages
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	No information available	Although the Town was impacted, Town of Danby did not report any damages

Notes:

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



9.4.5 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Danby’s risk assessment results and data used to determine the hazard ranking.

9.4.5.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

Based on analysis conducted by HAZUS, there are no critical facilities located within a hazard zone within the town of Danby.

Table 9.4-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No facility identified				

Source: 2020 GIS

9.4.5.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Town of Danby 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 Danby. The Town of Danby has reviewed



the Town hazard risk/vulnerability risk ranking table as well as its 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 of Danby indicated the following:

- Flooding and severe storms are definitely some of the most significant hazards of concern.
- Given the rural and inland nature of the Town, droughts and HABs are not a significant concern for the Town.

Table 9.4-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium*
Extreme Temperature	Medium
Flood	High*
Harmful Algal Bloom	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Low*

Note: The scale is based on the following hazard rankings as established in Section 5.3.

**The Town of Danby changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Town of Danby.*

9.4.5.3 Identified Issues

The Town of Danby has identified the following vulnerabilities within their community:

- Culvert replacement is a major initiative within the Town.
- Severe storms are causing road erosion.

Specific areas of concern based on resident response to the Town of Danby Hazard Mitigation Citizen survey include:

- West Danby along Route 34 are continuously flooding.
- East and West Miller Road are prone to erosion due to severe runoff and flooding.

9.4.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.



9.4.6.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.4-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
DB1		Transportation Accident	Town of Danby	Continue working with NSYDOT to survey West Danby fire station site distance to determine if intersection requires physical changes or additional lighting when fire station is used for other purposes	No Progress	Cost	-	TBD
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
DB2		Landslide, Utility Failure	Town of Danby	Mitigate risk related to stream pipeline crossings on Buttermilk Creek, including that at Comfort Road	No progress to report	Cost	-	Discontinued.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



9.4.6.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Danby has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Culvert project – upsizing on Gunman Road and Troy Road

9.4.6.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Danby participated in a mitigation action workshop in 2020 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).

Table 9.4-19 summarizes the comprehensive range of specific mitigation initiatives the Town of Danby would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.4-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.4-19. 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
2021-T DANBY-001	Tree Maintenance Program	3,5	Severe Storm, Severe Winter Storm	Problem: Severe storm events and winter storms can cause downed trees and power lines within the town.	No	No	Medium	Town DPW	Medium	High	Municipal Public Works Budget,	Medium	SIP	NR
				Solution: Introducing a maintenance program to monitor decaying at-risk trees and scheduled removal and cutting of branches will reduce tree debris during storms.										
2021-T DANBY-002	Flash Flood Study	1,4	Flood	Problem: The Town experiences flash flood events and subsequent damages. This leads to road closures, damages, and emergency rescues.	No	No	Long	Town Board	Medium	High	HMA, HMGP, BRIC	High	SIP	SP
				Solution: Conduct a study to determine the cause of flash flood events and identify problem areas. Once study is complete, the municipality will review the findings, determine the best solution(s), and implement projects.										
2021-T DANBY-003	Cell Service Study	1,2,5	All Hazards	Problem: The Town has limited cell service and internet connection.	No	No	Long	Town, Cell Phone Service Companies	High	High	Municipal Budget as needed.	High	SIP	PR
				Solution: Conduct an assessment of the regions poorly covered by cell service and internet										



Table 9.4-19. 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
				connection and provide the necessary service/ procedures especially for those who are considered vulnerable populations.										
2021-T DANBY-004	Mutual Aid Development	1,2,4	Severe Winter Storm, Severe Storm	<p>Problem: The Town of Danby has limited capacity to respond during extreme weather events due to the limited municipal emergency response capacity.</p> <p>Solution: As the Town of Danby is primarily reliant on the regional Bangs Ambulance Services and has a volunteer fire department, the town can work with the county to develop a potential hub for county/state emergency response, similar to the Town of Newfield that has a state police hub within the municipality.</p>	No	No	Medium	Town EMS	Medium	High	Municipal Budget as needed	High	SIP	ES
2021-T DANBY-005	Culvert Replacement	1,3,5	Flood	<p>Problem: In rural areas of the town, stormwater drainage systems are inadequate to handle the flow of water during flash floods. The town needs to identify and inventory these sites.</p> <p>Solution: Work with SWCD to identify each site and</p>	No	No	Long	Town DPW	High	High	NYSDEC CSC, NAACC, Municipal and County budget as needed	High	SIP	SP



Table 9.4-19. 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
				determine best solution to retrofit or redevelop infrastructure. Use inventory to identify future projects.										
2021-T DANBY-006	Emergency Route Intersection Clearance	All Goals	All Hazards	<p>Problem: The intersection of Sylvan Ln. and NYS Rt. 34/96, the is the access road to the West Danby fire Station and it has a terrible line of sight for vehicles leaving sylvan Ln. entering 34/96. There have been many close calls there with fire apparatus and people traveling on 34/96. Years ago flashing yellow caution lights were installed that are activated by pushing a button in the truck bay of the fire station when leaving, but these lights are ignored by motorists on 34/96 and often don't work.</p> <p>Solution: Funding for a study to look in to cutting back the earth banks which may require re-location of the municipal water lines. Funding needed to do the work.</p>	No	No	Long	Town	Medium	High	Assistance to Firefighters Grant Program, Town Budget	High	SIP	ES
2021-T DANBY-007	Emergency Route Development	All Goals	All Hazards	<p>Problem: The main route of emergency response between Danby and West Danby is approx. 50% dirt</p>	No	No	Long	Town	Medium	High	Assistance to Firefighters Grant	High	SIP	ES



Table 9.4-19. 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
				<p>road. The Town has one Fire District with 2 Stations, Danby and West Danby. Each department responds as automatic mutual aid to all fire and MVA incidents. The sections of Station Rd. and Bald Hill Rd. that are Town road are unpaved and at certain times of the year impassable to fire apparatus due to the adverse conditions of the dirt roads. Even when are in passable condition the dirt and grime get in to places that can't be cleaned and cause systems or controls on the apparatus to fail or not function properly.</p> <p>Solution: Funding for a study of corrective measures such as under drains and cross drainage, road-bed stabilization, surface treatments, road ditch and bank stabilization and funding to take corrective actions that may come out of any studies.</p>							Program, Town Budget			
	Town Hall Generator Installation	All goals	All Hazards	Problem: the town hall does not have adequate backup power which could lead to	Yes	No	1 year	Town Hall	High	Continued operation	HMA and HMGP	High	SIP	SP



Table 9.4-19. 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
2021-T DANBY-008				<p>the discontinued operation of critical services.</p> <p>Solution: Install a 3-phase generator at Town Hall to provide adequate backup power for town facility and associated service operation.</p>						for critical services.				
2021-T DANBY-009	Jennings Pond Dam	1,2	Flood, Severe Storms	<p>Problem: Jennings Pond Dam is classified as a class C “high hazard” dam and poses a threat to the surrounding community.</p> <p>Solution: Solution: The Town of Danby will conduct outreach to the dam owner and operator about the condition of the dam and potential risks posed by a dam failure and support an inspection plan of the dam by an engineer in accordance with the existing EAP and NYSDEC Dam Safety guidelines. The Town will aid in the development of an updated EAP as needed. If updates have been completed on the dam, the Town will request an inspection by NYSDEC to reclassify the dam.</p>	Yes	No	Short, within 5 years	Town of Danby	Low	High	Municipal Budget	High	EAP	PR

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
PDM	Pre-Disaster 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



Table 9.4-20. 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	Total	High / Medium / Low
2021-T DANBY-001	Tree Maintenance Program	1	1	1	1	0	0	-1	1	0	0	0	0	1	1	6	Medium
2021-T DANBY-002	Flash Flood Study	1	1	1	1	1	1	-1	1	0	1	1	1	1	1	11	High
2021-T DANBY-003	Cell Service Study	1	1	1	1	1	1	-1	1	0	1	1	1	1	1	11	High
2021-T DANBY-004	Mutual Aid Development	1	1	1	1	1	1	-1	1	0	1	1	1	1	1	11	High
2021-T DANBY-005	Culvert Replacement	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-T DANBY-006	Emergency Route Intersection Clearance	1	1	1	1	1	0	0	0	1	1	1	1	1	1	11	High
2021-T DANBY-007	Emergency Route Development	1	1	1	1	1	0	0	0	1	1	1	1	1	1	11	High
2021-T DANBY-008	Town Hall Generator Installation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T DANBY-009	Jennings Pond Dam	1	1	1	1	1	1	0	1	1	0	1	1	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.4.7 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.4-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak		003; 006; 007; 008			003				008	004; 006; 007
Drought		003; 006; 007; 008			003				008	004; 006; 007
Extreme Temperature		003; 006; 007; 008			003				008	004; 006; 007
Flood		002; 003; 005; 006; 007; 008		009	003; 009				002; 005; 008	004; 006; 007
Harmful Algal Bloom		003; 006; 007; 008			003				008	004; 006; 007
Invasive Species		003; 006; 007; 008			003				008	004; 006; 007
Severe Storm		001; 003; 004; 006; 007; 008		009	003; 009			001	008	004; 006; 007
Severe Winter Storm		001; 003; 004; 006; 007; 008			003			001	008	004; 006; 007
Wildfire		003; 006; 007; 008			003				008	004; 006; 007

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.



9.4.8 Staff and Local Stakeholder Involvement in Annex Development

The Town of Danby followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Code Enforcement and Highway Superintendent. The Code Enforcement Officer represented the community on the Town of Danby 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.

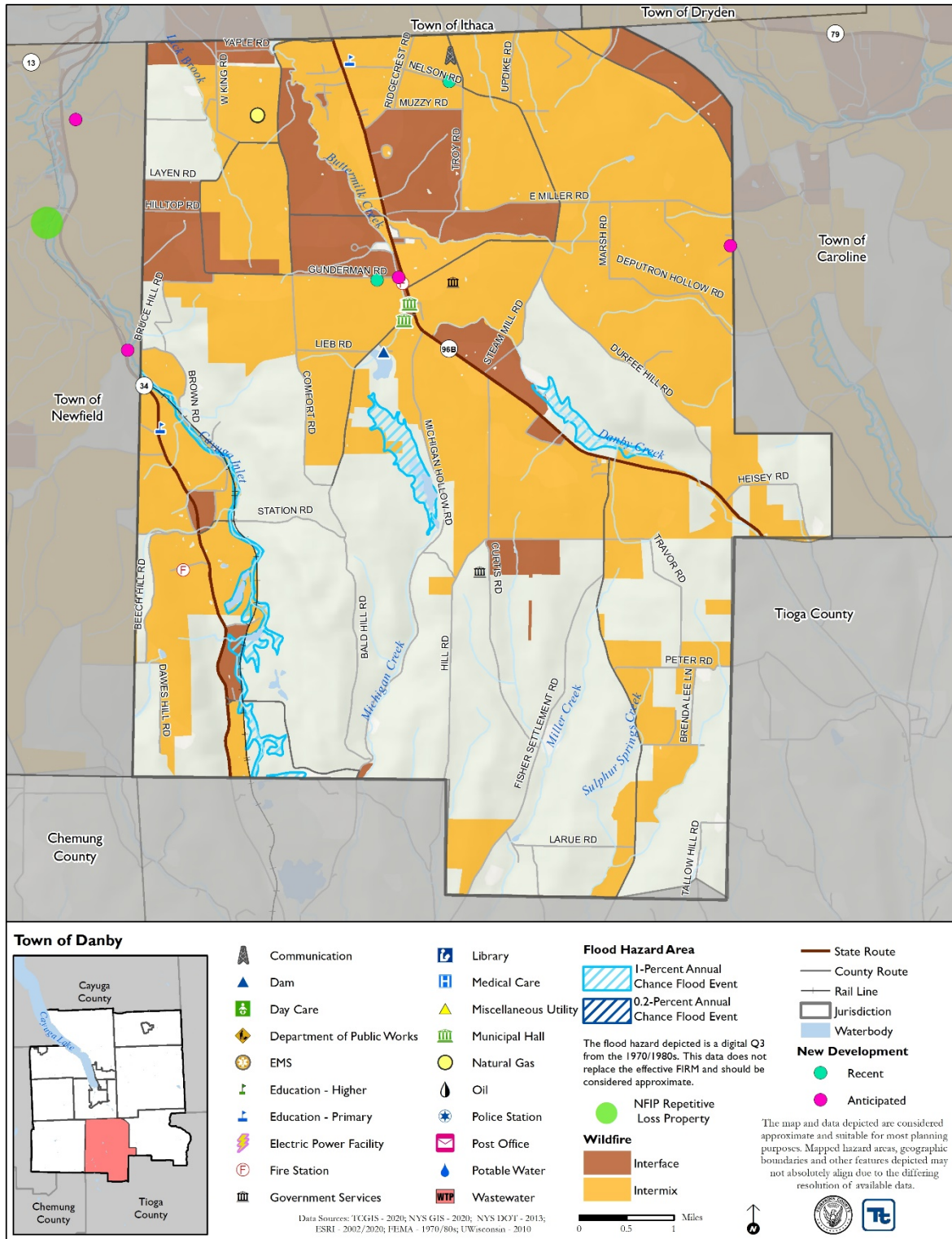
Additional documentation on the Town of Danby's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.4.9 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Danby that illustrates the probable areas impacted within the Town of Danby. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Danby has significant exposure. The map is provided on the next page.



Figure 9.4-1. Town of Danby Hazard Area Extent and Location Map



Project Name:	Town Flood Study		
Project Number:	2021-T DANBY-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	The Town experiences flash flood events and subsequent damages. This leads to road closures, damages, and emergency rescues.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct a study to determine the cause of flash flood events and identify problem areas. Once study is complete, the municipality will review the findings, determine the best solution(s), and implement projects.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500 year flood	Estimated Benefits (losses avoided):	Understand root cause of flooding and solutions.
Useful Life:	20 years	Goals Met:	All goals
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMA, HMGP, BRIC
Responsible Organization:	Town	Local Planning Mechanisms to be Used in Implementation if any:	Land Use Regs., Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Work with County on developing a county wide flood study.	Medium	Less likely to have the opportunity to fully evaluate flood issues in town.
	Town Flood Study	Medium	Best solution
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Town Flood Study	
Project Number:	2021-T DANBY-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life and property
Property Protection	1	The project protects life and property
Cost-Effectiveness	1	The project is most cost effective
Technical	1	The project is technically possible
Political	1	There is no political opposition to project
Legal	1	There are no legal complications
Fiscal	-1	Need funding
Environmental	0	No adverse environmental impact
Social	1	This project has a positive social impact
Administrative	1	This is administratively supported
Multi-Hazard	0	This deals with multiple hazards
Timeline	1	This project is possible within this timeline
Agency Champion	1	Yes
Other Community Objectives	0	Yes
Total	11	
Priority (High/Med/Low)	High	



Project Name:	Town Hall Generator Installation		
Project Number:	2021-T DANBY-008		
Risk / Vulnerability			
Hazard(s) of Concern:	All		
Description of the Problem:	The Town hall does not have adequate backup power which could lead to the discontinued operation of critical services.		
Action or Project Intended for Implementation			
Description of the Solution:	Install a 3-phase generator at Town Hall to provide adequate backup power for town facility and associated service operation. Retrofit for flood protection as necessary		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	NA	Estimated Benefits (losses avoided):	Town maintains continuity of service during the event.
Useful Life:	20 years	Goals Met:	All goals
Estimated Cost:	High	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	Short term	Potential Funding Sources:	HMA and HMGP
Responsible Organization:	Building maintenance committee	Local Planning Mechanisms to be Used in Implementation if any:	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Purchase solar power	High	Weather dependent and high cost.
	Purchase generator	High	High cost but provides constant power
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Town Hall Generator Installation	
Project Number:	2021-T DANBY-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life and property
Property Protection	1	The project protects life and property
Cost-Effectiveness	1	The project is most cost effective
Technical	1	The project is technically possible
Political	1	There is no political opposition to project
Legal	1	There are no legal complications
Fiscal	-1	Need funding
Environmental	0	No adverse environmental impact
Social	1	This project has a positive social impact
Administrative	1	This is administratively supported
Multi-Hazard	0	This deals with multiple hazards
Timeline	1	This project is possible within this timeline
Agency Champion	1	Yes
Other Community Objectives	0	Yes
Total	11	
Priority (High/Med/Low)	High	



9.5 Town of Dryden

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

9.5.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Dryden’s hazard mitigation plan primary and alternate points of contact.

Table 9.5-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: David Sprout/Code Enforcement Officer Address: 93 E. Main St, Dryden, NY 13053 Phone Number: 607 844-8888 x215 Email: david@dryden.ny.us	Name/Title: Nancy Munkenbeck Address: 832 Ringwood Road, Ithaca, NY 14850 Phone Number: 607 539-7902 Email: nwm1@cornell.edu
NFIP Floodplain Administrator	
Name/Title: David Sprout & Shelley Knickerbocker/Code Enforcement Officers Address: 93 E. Main St, Dryden, NY 13053 Phone Number: 607 844-8888 Email: david@dryden.ny.us/sknickerbocker@dryden.ny.us	

9.5.2 Municipal Profile

The Town of Dryden is a rural municipality encompassing 94.9 square miles in eastern Tompkins County. Dryden is bordered to the northwest by the Town of Lansing, to the southwest by the Town of Ithaca, and to the south by the Town of Caroline. Cayuga County borders to the North, and Cortland County to the East. The Town is located along New York State Route 13 which connects Elmira, Ithaca, and Cortland. Dryden is among the state’s largest towns, and contains the Village of Dryden, the Village of Freeville, and the hamlet of Etna. Dryden Lake Park is a 200-acre wildlife area in the southeast of Dryden. Other state parks include the Hammond Hill State Park and Yellow Barn State Forest.



Dryden was established in 1797 as one of 28 townships created and set aside by State Legislature to be divided into 100 lots for Revolutionary War veterans as payment for their services. Due to the large white pine and hardwood forests, lumbering was a major economic activity in the Town. Agriculture began to replace lumbering as the forests were depleted. Major economic activity is concentrated in the Village of Dryden, located at the intersection of State Routes 13 and 392.

The Town of Dryden is governed by a Town Board, consisting of four Councilmembers and a Supervisor. Councilmembers are elected in alternating four-year terms, and Supervisors are elected for two-year terms. The Town Board manages the budget, oversees advisory committees, and writes and approves all local laws and resolutions.

According to the 2014-2018 American Community Survey, the Town of Dryden population is 12,311.

9.5.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.5-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.5-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.5-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family/two-family	10	0	19	0	20	0	11	0	20	0
Multi-Family	0	0	0	0	3	0	0	0	6	0
Other (commercial, mixed-use, etc.)	4	0	4	0	9	0	0	0	2	0
Total										
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 2014 to Present										
None										
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Maifly Townhouses	Multi-Family and Single Family		47		Varna – Corner of 366/Freese Roads		None		Approved, not yet built	



SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.5.4 Capability Assessment

The Town of Dryden performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.5.4). The Town of Dryden identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.5.4.1 Planning, Legal, and Regulatory Capability

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



Table 9.5-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Planning Department/Code Enforcement	Yes
<p>Comment: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries. *The building code addresses construction standards for natural hazards including wind and earthquake.</p>					
Zoning Code	Yes	Town of Dryden Zoning Law, LL #1-2015	Local	Planning Department, Local Planning Board, Zoning Board of Appeals	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Town of Dryden Subdivision Law LL#4-2012	Local	Planning Department, Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730). - Minor subdivisions – less than five lots- may be approved by Planning Department.</p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Planning Department	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No		Local		No
Comment:					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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>					
Growth Management Regulation	Yes	Zoning Law Sections: 605, 606, 607, 703 Conservation Subdivision	Local	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p> <p>*Smart Growth minimizes development in hazard areas.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board or Town Board if SUP is required	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a) The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</p> <p>*When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	NYDEC/ Town Planning Department	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019.</p>					
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA)	Local, State, Federal	Planning Department (Code Enforcement)	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <p>*The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Planning Department	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p> <p>*This (predates MS4 designation)</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name , date , link)	Authority (local, Town , state, federal)	Department / Agency Responsible	State Mandated
Climate Adaptation	No	NYS Executive Law, Article 75	Local	-	Yes
Comment: <i>The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</i>					
Disaster Recovery Ordinance	No	-	Local	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	Local	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	-	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Planning Department, Town Board, and Local Planning Board	No
Comment: <i>Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level.</i> *When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	-	No
Comment: <i>A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.</i>					
Disaster Debris Management Plan	No	-	Local	-	No
Comment: <i>Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</i>					
Floodplain or Watershed Plan	No	-	Local	-	No
Comment: <i>The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</i>					
Stormwater Plan	Yes	Stormwater Management Program Plan 2014	Local	Planning Dept.	Yes
Comment: <i>Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</i>					
Open Space Plan	Yes	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)	Local	Conservation Board	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	-	No
Comment:					
Habitat Conservation Plan	No	-	Local	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	Yes	NYCRR Part 390 Agricultural and Farmland Protection -	Dryden Ag & Farmland Protection Plan 2018/Right to Farm Law LL#1-1992	Agricultural Advisory Committee	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	-	-	-	-	-
Comment: NA					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes HAZNY	Hazard Mitigation Plan, Chapter 5, Adopted 2000	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA. *This informs level of risk of hazards of concern and aligns with the hazard mitigation plan.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	-
Comment:					
Other: Emergency Response Plan	Yes	Town & Village of Dryden Emergency Action Plan for Virgil Creek Dam 2006	Local	Town Board	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS. *					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.5-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes – Planning Dept. processes, then forwards development projects to Town or Planning Board.
Permits are tracked by hazard area. For example, floodplain development permits.	Yes
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes. Buildout Analysis by Planning Board member David Weinstein indicated 917 vacant parcels in the Town

9.5.4.2 Administrative and Technical Capability

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



Table 9.5-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	Safety & Disaster Preparedness Committee*
Environmental Board/Commission	Yes	Conservation Board
Open Space Board/Committee	Yes	Conservation Board
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance programs to reduce risk	Yes	Highway/DPW
Mutual aid agreements	Yes	Fire Departments?
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes*	The Town sub-contracts its engineering to TG Miller
Engineers or professionals trained in building or infrastructure construction practices	Yes	Highway/DPW/Code Enforcement Officers
Planners or engineers with an understanding of natural hazards	Yes*	The Town sub-contracts its engineering to TG Miller
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	Yes	Planning/Code Enforcement Officers
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Planning/Code Enforcement Officers
Surveyor(s)	No	-
Emergency Manager	Yes	Town Supervisor
Grant writer(s)	Yes	-
Resilience Officer	No	-
Other	Yes	Safety & Disaster Preparedness Committee*

9.5.4.3 Fiscal Capability

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

Table 9.5-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	-
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, for PUD's only
Stormwater utility fee	No
Incur debt through general obligation bonds	-
Incur debt through special tax bonds	-



Financial Resources	Accessible or Eligible to Use (Yes/No)
Incur debt through private activity bonds	-
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	-
Open Space Acquisition funding programs	-
Other	-

9.5.4.4 Education and Outreach Capability

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

Table 9.5-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes. Town of Dryden Clerk
Personnel skilled or trained in website development?	No
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No* Existing Facebook page could be used for outreach
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes. Safety & Disaster Preparedness Committee
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	Safety & Disaster Preparedness Committee *

9.5.4.5 Community Classifications

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

Table 9.5-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4 for single & two family 4 for commercial and industrial property	9/27/16 (evaluation date)
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	-	-
NYSDEC Climate Smart Community	Yes	Bronze	2019
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other			

Note:



N/A Not applicable
NP Not participating
- Unavailable

9.5.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.5-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High Capacity exists and is in use
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.5.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

David Sprout, CEO

Table 9.5-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. Do you maintain a list of properties that have been damaged by flooding?	Areas along major streams and lesser streams, particularly steep slope streams. *no list of damaged properties
Do you maintain a list of property owners interested in flood mitigation?	None at this time



NFIP Topic	Comments
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	Updating Flood maps –STARR II
How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction?	Damage, of any origin, where the cost of structure restoration to its 'before damaged condition' is equal to or greater than 50% of pre-damage value./ None declared.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	No, the official FIRM is outdated and difficult to interpret. (Flood Damage Prevention Law allows use of better tools)
Resources	
What local department is responsible for floodplain management?	Planning Department - Code Enforcement Officers are the floodplain managers
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?	Probably
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. General refresher training. Map revision & map amendment training
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	DOS Flood Hazard Area checklist is utilized during plan reviews, Floodplain development permits are required in SFHAs
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Cost of Improvement is equal to or greater than 50% of market value before the start of construction
What are the barriers to running an effective NFIP program in the community, if any?	No barriers
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	No violations
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAV – 9/21/2016 (Town) CAV – 6/19/19 (Village of Dryden)
Regulatory	
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?	LL #1-1987 Law has never been amended
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Meets minimum requirements



NFIP Topic	Comments
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?	Subdivision regulations, Site Plan Review, Stormwater Pollution Prevention Law, the Comprehensive Plan, and development design guidelines all support floodplain management.
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	No***At one time there was participation but it was perceived to take too much time and effort for too little in return

9.5.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.5-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Dryden	23	9	\$93,329.29	0	0

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of February 28, 2018. The total number of repetitive loss properties does not include severe repetitive loss properties

RL Repetitive Loss; SRL Severe Repetitive Loss

9.5.4.9 Additional Areas of Existing Integration

Emergency services, including firefighting and first responder services are provided by the local volunteer fire company. As residents increasingly work outside the Town, it is more difficult to recruit volunteers, even as the demand for services is increased. Significant and focused effort is required to keep these essential volunteer services sufficiently staffed, trained, and funded to provide the community the emergency response that is needed. Increasing support and pride in these services will increase quality of life for all residents.

As the Town updates its comprehensive plan, it is anticipated that several projects and policies related to hazard mitigation will be able to be further advanced. Mitigation is also very integrated with other planning initiatives. For example, in 2017, the Town developed a Natural Resources Conservation Plan which among other things recommended establishing and maintain effective buffer zones or undisturbed vegetation and soils along streams and other surface waters, preserving and restoring wetlands, and promoting farm practices that increase resiliency to the effects of climate change.



9.5.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

In the event of the Virgil Creek Dam failing: northbound Rt. 38 traffic shall be detoured onto Logan’s Run, Penny Lane, Ferguson Road, and Irish Settlement Road to continue westward on Rt. 13 towards Ithaca or via Routes 13 and 366 towards Cortland. Westbound NYS Rt.392 traffic will be detoured via Livermore Rd to Rt. 13 toward Cortland or via Livermore Rd. and Bahar Drive to Rt. 13, following Routes 38 and 366 through Freeville toward Ithaca. Truck traffic will be detoured around the Village (of Dryden) using State highways. Southbound trucks will detour via Routes 366 and 38, while northbound trucks will detour via Rt. 79.

However, Evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

Three shelter sites have been identified in the Town of Dryden Hazard Mitigation Plan. That plan included the Villages of Dryden and Freeville.

Table 9.5-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Dryden Middle/High School	118 Freeville Road Dryden, NY	1742/871	No (with exceptions)	Yes	Yes (some)	Nurse’s suite w/basic first aid	Commercial Kitchen
Cassavant Elementary School	32 School Street, McClean, NY	120/60	Yes	Yes	No	None	None
Varna Community Center	943 Dryden Road, Ithaca, NY	25	Yes	Yes	Yes	None	None



Temporary Housing

There are a few locations in the Town for temporary housing as noted in the table below.

Table 9.5-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Bethel Grove Community Center	1825 Slaterville Road	Water, electric, septic	75 (pre-Covid)	Parking lot/field	Additional Backup power
Dryden Veterans Memorial Home	2272 Dryden Rd	Water, electric, septic	100 (pre-Covid)	Parking lot/field	Additional Backup power
Ellis Hollow Community Center	111 Genung Rd	Water, electric, septic	80 (pre-Covid)	Parking lot/field	Additional Backup power

Permanent Housing

The Town does not have any available land for permanent housing. However, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations in neighboring communities.

Table 9.5-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are no permanent housing locations in the Municipality.					



9.5.5 Hazard Event History Specific to the Town of Dryden

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Dryden’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of the County. Table 9.5-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.5-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Town was affected by event though damages were not documented.
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Town was affected by event though damages were not documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Town was affected by event though damages were not documented.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Several culverts were washed out. One basement was flooded as a direct result of the culvert failure.



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 and Flooding (DR-4472)	Yes		Town was affected by event though damages were not documented.

Notes:

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

9.5.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Dryden’s risk assessment results and data used to determine the hazard ranking.

9.5.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.5-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
ETNA VOLUNTEER FD TRAINING BLDG	Emergency Services	Yes	Yes	Yes - 005



Source: Tompkins County HAZUS 2020

9.5.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Cattaraugus as a whole. Therefore, each Town of Dryden 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 Dryden. The Town of Dryden has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Dryden indicated the following:

- The Town of Dryden concurs with the hazard ranking identified in the broader planning effort.

Table 9.5-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	High
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.5.6.3 Identified Issues

The Town of Dryden has identified the following vulnerabilities within their community:

- Due to the significant number of agricultural operations in Dryden, drought continues to be a significant potential hazard.
- Flooding continues to also be a hazard of great concern for the Town.



Specific areas of concern based on resident response to the Town of Dryden Hazard Mitigation Citizen survey include:

- Severe Winter Storm and Drought were the hazards that most respondents experienced over the last 5 years.
- Most residents were Concerned, Somewhat Concerned or Very Concerned about Climate Change.
- No one that responded lived in the floodplain or had flood insurance.
- Every respondent owned their residence.

9.5.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.5.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.5-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps Project to be included in 2021 HMP or Discontinue If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why.
DR1	-	Flash Flood	Town of Dryden	Establish conservation corridors along stream banks to encourage riparian vegetation for channel and floodplain stabilization and wildlife habitat	No progress	Cost	-	Action will be carried on to 2021 plan
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
DR2	-	Flash Flood	Town of Dryden	Actively inventory and mitigate risk associated with pipeline stream crossings including Six Mile Creek at German Cross Road	Complete	Cost	Low	Project is complete; pipeline study was done
						Level of Protection	Medium	
						Damages Avoided; Evidence of Success	Less flood	



9.5.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Dryden has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Several private streamside properties along Fall Creek in the Town of Dryden were planted with native trees and shrubs to formalize riparian buffer corridors.

9.5.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Dryden participated in a mitigation action workshop in October 2020 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: INSERT PUBLICATIONS e.g., 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).

Table 9.5-19 summarizes the comprehensive-range of specific mitigation initiatives the Town of Dryden would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.5-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.5-19. 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
2021-T DRYDEN-001	Implement Best Practices for Roadside Ditch Protection for Steeply Sloped Roads, Phase One	1,3	Flooding, Severe Storm	<p>Problem: High velocity runoff from severe rain events/rapid snow pack melt erodes roadside ditches and overwhelms culverts. Sediment laden stormwater clogs undersized culverts and contributes to flooding when ditches are overwhelmed. Road ditches are sometimes built and maintained without Best Management Practices that further exacerbates flooding and sediment issues.</p> <p>Solution: Work with</p>	No	No	Medium	Town DPW, Cornell Local Roads	High	Medium	NYS DEC	High	SIP, NSP	SP



Table 9.5-19. 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
				Cornell Local Roads to design and implement best practices for roadside ditches of highest priority concern. This may include installing soft or rock check dams where slope is 2.5-10%, rock line and install hard check dams for slopes 10-15%. Phase one focus should include Mt. Pleasant Rd. where some check dams have been installed without proper design as well as Baker Hill Rd										
2021-T DRYDEN-002	Fred X Flood Elevation,	1,4	Flooding	Problem: A man, who would	No	No	1 year	Town Planning	Low	Property Protection	HMGP	High	SIP	SP



Table 9.5-19. 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
	Flood Proofing			<p>otherwise be homeless, set up 'camp' on a small piece of land that he owns on Lower Creek Road. The parcel is in the 100-year flood zone.</p> <p>Solution: Ensure that the camp is sufficiently elevated by completing a survey , flood proof or elevate as necessary and issue an elevation certificate.</p>										
2021-T DRYDEN-003	Riparian Buffer	1	Flooding, HAB	<p>Problem: Development along stream corridors and floodplains can disrupt a stream's dynamic equilibrium resulting in flooding and</p>	No	No	2 years	Town DPW	Moderate	Natural System Protection	HMGP, Climate Smart Communities	High	NSP	PR



Table 9.5-19. 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
				<p>erosion. Agricultural activities along streams with little or no vegetative protection increase sediment and nutrients.</p> <p>Solution: Enact and enforce a Riparian Buffer Law that prohibits, limits, or discourages development along stream corridors and natural floodplains.</p>										
2021-T DRYDEN-004	Stormwater Plan	1,2,4	Flood	<p>Problem: The town would like to update its stormwater plan as it is currently out of date and thus is no longer useful to the municipal DPW</p>	No	No	2 years	Conservation Board	Low	Updated plan	Municipal Budget, HMGP	High	LPR	PR



Table 9.5-19. 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
				<p>Solution: Conduct a review of the existing stormwater plan and overlay it with new data compiled from the County. Given the town is within an MS4 zone, the SWCD can provide additional data for the town to update its stormwater inventory and update its plan.</p>										
2021-T DRYDEN-005	Etna Fire Dept. Mitigation	1,2	Flood	<p>Problem: The Etna Volunteer Fire Building is located in a 100-year flood zone.</p> <p>Solution: The town engineer shall work with the facility maintenance</p>	Yes	No	2 years	Town Engineer	Moderate	Facility Flood Mitigation	HMGP	High	SIP	PR, PP



Table 9.5-19. 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
				crew to determine actions that need to be taken to retrofit and or relocate the facility.										
2021-T DRYDEN-006	Virgil Creek Dam	1,2	Flood, Severe Storms	Problem: Virgil Creek Dam is classified as a class C "high hazard" dam and poses a threat to the surrounding community.	Yes	No	Short, within 5 years	Town of Dryden	Low	High	Municipal Budget	High	EAP	PR



Table 9.5-19. 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
				<p>Solution: The Town of Dryden will conduct outreach to the dam owner and operator about the condition of the dam and potential risks posed by a dam failure and support an inspection plan of the dam by an engineer in accordance with the existing EAP and NYSDEC Dam Safety guidelines. The Town will aid in the development of an updated EAP as needed. If updates have been completed on the dam, the</p>										



Table 9.5-19. 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
				Town will request an inspection by NYSDEC to reclassify the dam.										

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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant Program
- PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:




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

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



Table 9.5-20. 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	Total	High / Medium / Low
2021-T DRYDEN-001	Roadside Ditch Protection for Steeply Sloped Roads, Phase One	1	1	1	1	0	0	0	1	0	1	1	1	1	1	10	High
2021-T DRYDEN-002	Fred X Flood Elevation, Flood Proofing	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
2021-T DRYDEN-003	Riparian Buffer	0	1	1	1	0	1	0	1	1	1	0	1	1	1	10	High
2021-T DRYDEN-004	Stormwater Plan	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T DRYDEN-005	Etna Fire Dept. Mitigation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T DRYDEN-006	Virgil Creek Dam	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.5.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.5-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Disease Outbreak										
Drought										
Extreme Temperature										
Flood	004	001; 002; 005	001; 003	006	003; 004; 005; 006	005			001; 002	
Harmful Algal Bloom			003		003					
Invasive Species										
Severe Storm		001	001	006	006				001	
Severe Winter Storm										
Wildfire										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.5.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Dryden followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: the Dryden Planning Department and Conservation Board. The Code Enforcement Officer, David Sprout, represented the community on the Town of Dryden 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.

Additional documentation on the Town of Dryden’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix X (Meetings).

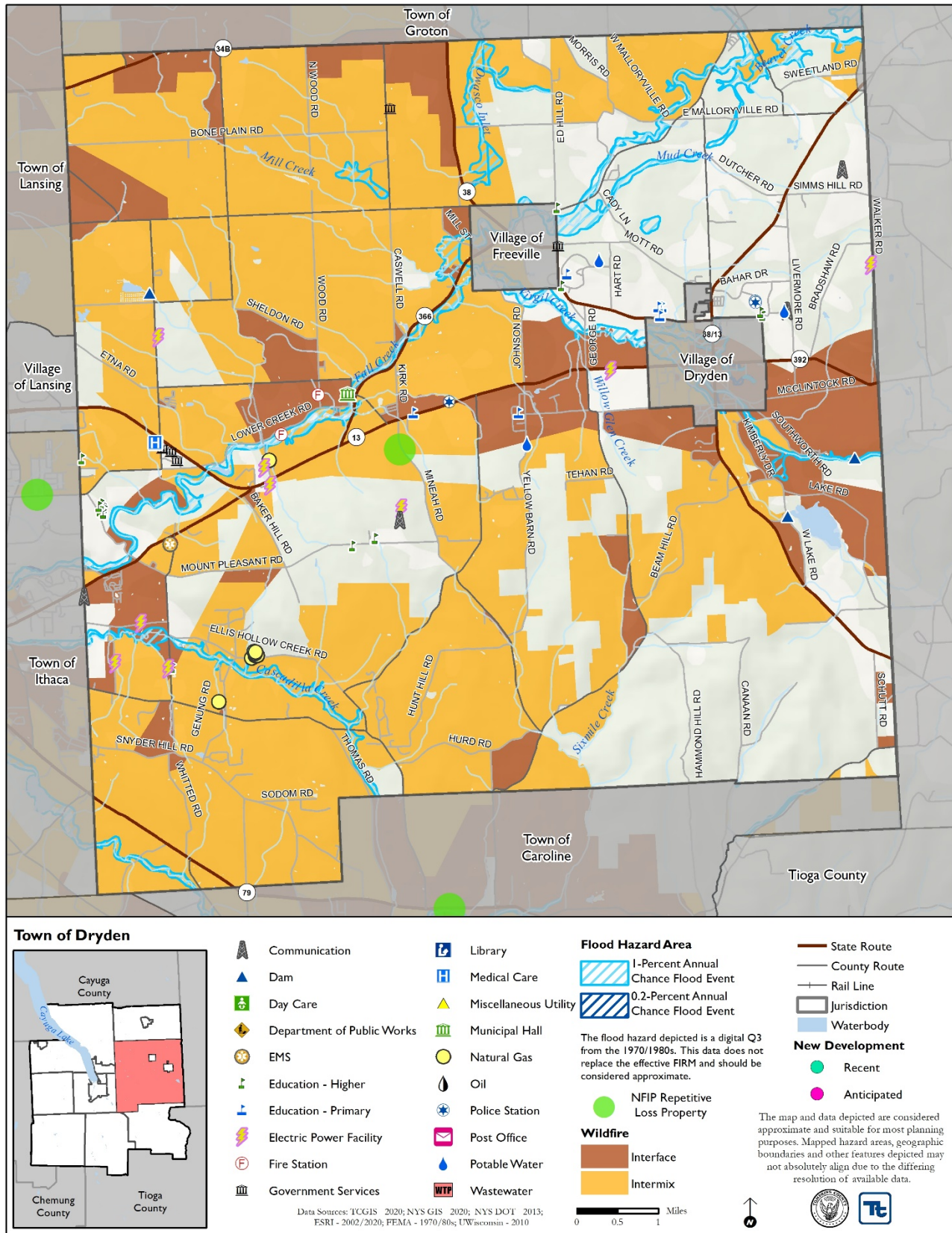


9.5.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Dryden that illustrates the probable areas impacted within the Town of Dryden. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Dryden has significant exposure. The map is provided on the next page.



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



Action Worksheet			
Project Name:	Fred X Flood Elevation and Flood Proofing		
Project Number:	2021-T DRYDEN-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	A man, who would otherwise be homeless, set up 'camp' on a small piece of land that he owns on Lower Creek Road. The parcel is in the 100-year flood zone.		
Action or Project Intended for Implementation			
Description of the Solution:	Ensure that the camp is sufficiently elevated by completing a survey, flood proof or elevate as necessary and issue an elevation certificate.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	100-year flood	Estimated Benefits (losses avoided):	Mitigate loss of life
Useful Life:	25 years	Goals Met:	1,5
Estimated Cost:	5000	Mitigation Action Type:	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediate
Estimated Time Required for Project Implementation:	Two Months	Potential Funding Sources:	Office for the Aging, Dept of Social Services
Responsible Organization:	Town of Dryden Planning	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Remove property owner	10-100k	Potential for litigation
	Purchase property	10-100k	Becomes homeless
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Fred X Flood Elevation and Flood Proofing	
Project Number:	2021-T DRYDEN-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	-
Property Protection	1	-
Cost-Effectiveness	1	-
Technical	1	-
Political	1	-
Legal	0	-
Fiscal	0	Funding from another source
Environmental	1	-
Social	1	No adverse impact
Administrative	1	-
Multi-Hazard	1	-
Timeline	1	-
Agency Champion	1	Code Enforcement Officers
Other Community Objectives	1	-
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Riparian Buffer		
Project Number:	2021-T DRYDEN-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding, HABs		
Description of the Problem:	Development along stream corridors and floodplains can disrupt a stream's dynamic equilibrium resulting in flooding and erosion. Agricultural activities along streams and little or no vegetative protection increase sediment and nutrients.		
Action or Project Intended for Implementation			
Description of the Solution:	Enact and enforce a Riparian Buffer Law that prohibits, limits, or discourages development along stream corridors and natural floodplains.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	100 year flood	Estimated Benefits (losses avoided):	Open Space; Habitat
Useful Life:	In perpetuity	Goals Met:	1
Estimated Cost:	Low	Mitigation Action Type:	Natural System Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	3 months
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	QRIP, IO
Responsible Organization:	Town of Dryden Town Board	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Increase development fees	Low	Not a strong deterrent
	Purchase development rights	High	Infeasible
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Riparian Buffer	
Project Number:	2021-T DRYDEN-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	Pro and con public opinion
Legal	1	
Fiscal	0	
Environmental	1	
Social	1	No adverse impact or disruption
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	Conservation board
Other Community Objectives	1	Open space protection
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Roadside Ditch Protection for Steeply Sloped Roads, Phase One		
Project Number:	2021_Town_Dryden_001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Problem: High velocity runoff from severe rain events/rapid snow pack melt erodes roadside ditches and overwhelms culverts. Sediment laden stormwater clogs undersized culverts and contributes to flooding when ditches are overwhelmed.		
Action or Project Intended for Implementation			
Description of the Solution:	Solution: Install soft or rock check dams where slope is 2.5-10%, rock line and install hard check dams for slopes 10-15%. Phase one focus on Mt. Pleasant Rd. where some check dams have been installed without proper design, Baker Hill Rd		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	Flash flood	Estimated Benefits (losses avoided):	Flood Mitigation
Useful Life:	Permanent if mandated	Goals Met:	1, 3
Estimated Cost:	10-100k	Mitigation Action Type:	Natural System Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	Unknown	Potential Funding Sources:	TEP, CHIPS,WQIP
Responsible Organization:	Town of Dryden Highway Dept.	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Only replace undersized culverts	High	High cost and incomplete solution
	Dig ditch deeper	Medium and High	Exacerbates problem
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Roadside Ditch Protection for Steeply Sloped Roads, Phase One	
Project Number:	2021_Town_Dryden_001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	For phase 1
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Grants would be needed
Environmental	1	Positive environmental impact; cleaner runoff entering receiving waters
Social	0	No adverse impact on any segment of population
Administrative	1	
Multi-Hazard	1	Flood and severe storm
Timeline	1	
Agency Champion	1	Stormwater management officer
Other Community Objectives	1	Support protection of functional capabilities.
Total	10	
Priority (High/Med/Low)	High	



9.6 Village of Dryden

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

9.6.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Dryden’s hazard mitigation plan primary and alternate points of contact.

Table 9.6-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael Murphy, Mayor Address: 16 South St., P.O. Box 820, Dryden, NY Phone Number: 607-844-8122 Email: mayor@dryden-ny.org	Name/Title: Paul Sabin, Jr. Address: 16 South St., P.O. Box 820, Dryden, NY Phone Number: 607-229-8580 Email: publicworks@dryden-ny.org
NFIP Floodplain Administrator	
Name/Title: Dave Sprout, Code Enforcement Officer Address: 16 South St., P.O. Box 820, Dryden, NY Phone Number: 607-844-8888 Email: david@dryden.ny.us	

9.6.2 Municipal Profile

The Village of Dryden is the largest community within the Town of Dryden. The Village of Dryden encompasses 1.66 square miles. The Village of Dryden is a rural community located 12 miles northeast of the City of Ithaca, and 13 miles southwest of the City of Cortland. In 1974 Tompkins Cortland Community College (TC3) was founded near the Village’s northern boundary. New York State Route 13 and US Route 38 cross through the center of Village, becoming a major link to the Finger Lakes and Ithaca Region to Interstate 81. Built in 1925, Montgomery Park is a 2.7-acre village owned park in the center of the Village. The Village is in close proximity to Virgil Creek and Dryden Lake, and surrounded by wooded hillsides, valleys and farmland.

The Village of Dryden was incorporated in 1857. Like the Town of Dryden, much of the early industry was focused on lumbering, later turning to agriculture. Most Village workers are employed in the nearby cities of Cortland and Ithaca, providing jobs in the educational industry. Commercial development in the area is mainly concentrated in the cities, leaving the Village of Dryden to maintain



its rural character and support of small businesses. The “four corners” area of the Village is the center of the community, home to a post office and grocery store.

The Village of Dryden is governed by a Mayor and Deputy Mayor, along with a three-person Board of Trustees. Members of the Board of Trustees and the Mayor serve two-year terms.

According to the 2014-2018 American Community Survey, the Village of Dryden population is 1,832.

9.6.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.6-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.



Figure 9.6-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.6-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	3	0	1	0	2	0	1	0	0	0
Multi-Family	0	0	1	0	6	0	1	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	0
Total	3	0	2	0	8	0	2	0	0	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 2015 to Present										
None	-	-		-		-		-		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Former DOT Land to be auctioned	Vacant Mixed Use desired	Unknown		-		None – Fall Creek NFFA		Vacant		

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.6.4 Capability Assessment

The Village of Dryden performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment



(Section 9.6.4). The Village of Dryden identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.6.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.6-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<p><i>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017). Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i></p>					
Zoning Code*	Yes	Village Code	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level - https://www.dryden-ny.org/zoning-board/pages/current-zoning-map</p> <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations*	Yes	Village Code	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Local Code Department	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<i>less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</i>					
Post-Disaster Recovery Plan or Regulation	No	-	Local	-	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: <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.</i></p> <p>*The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.</p>					
Growth Management Regulation	Yes	Village Code	Local	Local Planning Board	No
<p>Comment: <i>In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation. https://www.dryden-ny.org/zoning-board/pages/current-zoning-map</i></p>					
Site Plan Review*	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
<p>Comment: <i>The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</i></p> <p>*When the Village updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Code Enforcement	Yes
Comment: <i>New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</i>					
Flood Damage Prevention Law*	Yes	Federal: Participation in the NFIP; State: Community Risk and Resiliency Act (CRRRA)	Local, State, Federal	Code Enforcement	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: <i>A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. Village of Dryden has Flood Damage Prevention Law integrated in Village Code.</i></p> <p>*The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Code Enforcement	Yes
<p>Comment: <i>This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</i></p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No	NYS Executive Law, Article 75	Local	NA	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	NA	Local	NA	No
Comment:					
Disaster Reconstruction Ordinance	No	NA	Local	NA	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan*	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Village Planning Board	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level *When the Village updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	NA	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	NA	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually. <i>*Any new</i>					
Floodplain or Watershed Plan	No	-	Local	NA	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	No	-	Local	NA	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No	NYS Constitution - Article 9; Statute of	Local	NA	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
		Local Governments. Section 10 (7)			
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	NA	No
Comment:					
Habitat Conservation Plan	No	-	Local	NA	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	NA	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	NA	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	NA	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
*When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	No
Comment:					
Other: Emergency Response Plan	No	-	Local	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.6-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, Code Enforcement (Town contract)
Permits are tracked by hazard area. For example, floodplain development permits.	Yes, Code Enforcement
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.6.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Dryden.

Table 9.6-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		



Resources	Available? (Yes or No)	Department/ Agency/Position
Planning Board	Yes	Village Administration
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Swift 911, Virgil Dam siren
Maintenance programs to reduce risk	Yes	-
Mutual aid agreements	Yes	-
Technical/Staffing Capability		
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	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other		

9.6.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Dryden.

Table 9.6-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes – Active CDBG Projects
Capital improvements project funding	No
Authority to levy taxes for specific purposes	No
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	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Unlikely
Other federal or state Funding Programs	Yes – Upgraded water and sewer plants
Open Space Acquisition funding programs	No
Other	



9.6.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Dryden.

Table 9.6-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	No
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes – Swift 911, Facebook, Village website
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Virgil Dam siren
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	

9.6.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Dryden.

Table 9.6-8. 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	3	-
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other		-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.6.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand



a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.6-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High

**High Capacity exists and is in use*
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.6.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

David Sprout, CEO

Table 9.6-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	Egypt Creek – residents on Greystone Drive – Pebble Drive – Brookside Drive
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No formal lists
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	Yes – should be updated in 2022
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	NA
How many properties have been mitigated (elevation or acquisition) in your jurisdiction?	NA



NFIP Topic	Comments
<ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Outdated maps – FEMA/DEC currently updating
Resources	
What local department is responsible for floodplain management?	Code Enforcement
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"> If so, what type of assistance/training is needed? 	Yes – assistance needed
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Yes, but limited
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Unsure
What are the barriers to running an effective NFIP program in the community, if any?	Unaware of options
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	6/19/2019
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	Article 700: Flood Damage Prevention (Village of Dryden Laws)
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> 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?	Site Plan Review
Community Rating System (CRS)	
Does your jurisdiction participate in CRS?	No



NFIP Topic	Comments
<ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	

9.6.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Dryden.

Table 9.6-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Village of Dryden	26	18	\$109,540.13	0	0

Source: FEMA 2020
 Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of F July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.
 RL=Repetitive Loss; SRL=Severe Repetitive Loss

9.6.4.9 Additional Areas of Existing Integration

Emergency services, including firefighting and first responder services are provided by the local volunteer fire company. As residents increasingly work outside the Village, it is more difficult to recruit volunteers, even as the demand for services is increased. Significant and focused effort is required to keep these essential volunteer services sufficiently staffed, trained, and funded to provide the community the emergency response that is needed. Increasing support and pride in these services will increase quality of life for all residents.

Mitigation planning is becoming more integrated with planning in the Village of Dryden. The Village’s latest comprehensive plan identifies a number of hazard issues and items including the interest in establishing regulations on lands subject to seasonal or periodic flooding as well as directing Village officials to utilize natural resource maps to identify the best areas for residential, industrial, and recreation environments. Further comprehensive planning efforts will further integrate the resources developed as a part of this mitigation plan update.

9.6.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Village considers State Routes 13 and 38 as its main emergency evacuation routes. However, evacuation routes are specific to hazard event and routes will vary according to the location of the



event. The Village will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The Village has the following known emergency shelter. The event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.6-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Dryden Elementary School	36 Union Street	250+	No	Yes	Yes	None	None specified

Temporary Housing

The Village does not have any available land for temporary housing, as it is not necessarily needed due to the Village’s rural characteristics and has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the Village will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.6-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are no temporary housing locations identified at this time. Partnerships with Tompkins-Cortland Community for temporary housing may be developed.					

Permanent Housing

The Village does not have any available land for permanent housing. While the Village did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Village can utilize this analysis to identify potential locations.



Table 9.6-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are no locations for permanent housing locations located in the Village. Beyond vacant land, most added opportunities for permanent housing will be in the surrounding Town of Dryden.					

9.6.5 Hazard Event History Specific to the Village of Dryden

Village of Dryden has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the Village and its municipalities. The Village of Dryden’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Village of Dryden. Table 9.6-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.6-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	<i>Although the Town was impacted, Village of Dryden did not report any damages.</i>
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	<i>Although the Town was impacted, Village of Dryden did not report any damages.</i>



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	<i>Although the Town was impacted, Village of Dryden did not report any damages.</i>
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	-	<i>Although the Town was impacted, Village of Dryden did not report any damages.</i>

Notes:

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

9.6.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Village of Dryden’s risk assessment results and data used to determine the hazard ranking.

9.6.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.



Table 9.6-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
VILLAGE OF DRYDEN WASTEWATER PLANT	Government	Yes	Yes	003
DRYDEN FIRE STATION	Government	Yes	Yes	003

9.6.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Village of Dryden 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 Dryden. The Village of Dryden has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Dryden indicated the following:

- The Village does not have major issue around wildfires due to the damp and cool climate of the area.
- The Village is actively increasing its resilience to flooding by replacing and repairing existing stormwater infrastructure but flooding remains a significant concern for several village residents as well as important village facilities, including the wastewater treatment plant.
- The Village concurs with the hazard rankings of the broader plan.

Table 9.6-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Low*

Note: The scale is based on the following hazard rankings as established in Section 5.3.

*The Village of Dryden changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Village of Dryden



9.6.6.3 Identified Issues

The Village of Dryden has identified the following vulnerabilities within their community:

- Dryden Fire Station is located in the 1% annual chance flood area.
- Village of Dryden Wastewater Plan is located in the 1% annual chance flood area.
- Egypt Creek is a flashy system that threatens the Dryden Fire Station as well as residents around Lee Road and Greystone Drive.

Specific areas of concern based on resident response to the Village of Dryden Hazard Mitigation Citizen survey include:

- All respondents indicated they were concerned, very concerned or extremely concern about climate change.
- Most respondents indicated that the public is not aware of emergency warning systems.
- All respondents felt that the Village cares about their wellbeing in relation to hazards events.

9.6.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.6.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.6-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	-	
VD1		Flash Flood	Village of Dryden	Support inundation and stream corridor improvements for Virgil Creek	In Progress	Level of Protection	-	Egypt Creek Inundation mapping complete, no work on Virgil Creek Included as action item in update.
						Damages Avoided; Evidence of Success	-	



9.6.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Dryden has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Various improvements to streams flowing under various bridges in the village were mitigated to reduce adverse impacts to infrastructure.

9.6.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Dryden participated in a mitigation action workshop on October 22nd, 2020 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).

Table 9.6-19 summarizes the comprehensive range of specific mitigation initiatives the Village of Dryden would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.6-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.6-19. 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
2021-Dryden Village 001	Egypt Creek Flood Mitigation Project	3	Flood, Severe Storm	<p>Problem: Flooding is an annual problem along Egypt Creek in the Village of Dryden. Increased runoff from expanding development, sediment clogged channels, and undersized culverts that cannot convey increased flows contribute to the problem. Including exposure to the local fire station.</p> <p>Solution: Conduct a hydraulic and hydrologic analysis of the North and South branches of Egypt Creek to develop solutions for attenuating the flow of upstream stormwater and develop an implementation plan.</p>	Yes	No	2 Years	Village of Dryden	\$250,000	NA	FEMA BRIC, HMGP, FMA	High	NSP	PP, NR
2021-Dryden Village 002	Village Waste Water Treatment Plant @ Virgil Creek Flood Mitigation Project	1,3	Flood, Severe Storm	<p>Problem: The Village of Dryden's wastewater treatment plant is not protected from Virgil Creek flooding water.</p> <p>Solution: The proposal is to conduct an analysis to protect the plant which anticipates extending the existing levee 300 feet. This would provide flood protection 60 feet past the WWTP (Wastewater Treatment Plant) building.</p>	Yes	Maybe	2 Years	Village of Dryden	\$300,000	NA	FEMA BRIC, HMGP, FMA	High	SIP	PP



Table 9.6-19. 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
2021-Dryden Village 003	Critical Facilities Flood Prevention	1,3	Flood	<p>Problem: The VILLAGE OF DRYDEN WASTEWATER PLANT and the DRYDEN FIRE STATION are both critical facilities located in a 100-year floodplain.</p> <p>Solution: Conduct assessment of existing municipal facilities and consider retrofitting/ elevating existing structures that are prone to flooding. Alternatively consider applying for FEMA funding for acquisition and relocation/ reconstruction of facility in a non-flood zone.</p>	Yes	No	3 years	Village DPW	High	Flood Prevention	HMGP, FMA, Municipal Building Budget	High	SIP	SP, 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
 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

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program
 BRIC Building Resilient Infrastructure and Communities

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.


Benefits:



NFIP National Flood Insurance Program
OEM Office of Emergency Management

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



Table 9.6-20. 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	Total	High / Medium / Low
2021 - V Dryden - 001	Egypt Creek Flood Mitigation	1	1	1	0	1	0	1	0	0	-1	1	1	1	0	7	High
2021 - V Dryden - 002	Village Waste Water Plant Retrofit	1	1	1	0	1	0	1	0	0	-1	1	1	1	0	7	High
2021-Dryden Village 003	Critical Facilities Flood Prevention	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.6.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.6-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Drought										
Extreme Temperature										
Flood		002; 003	001			001; 002; 003		001	003	
Harmful Algal Bloom										
Invasive Species										
Severe Storm		002	001			001; 002`		001		
Severe Winter Storm										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.6.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Dryden followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Code Enforcement and Public Works. The Mayor represented the community on the Village of Dryden 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.

Additional documentation on the Village of Dryden’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.6.10 Hazard Area Extent and Location

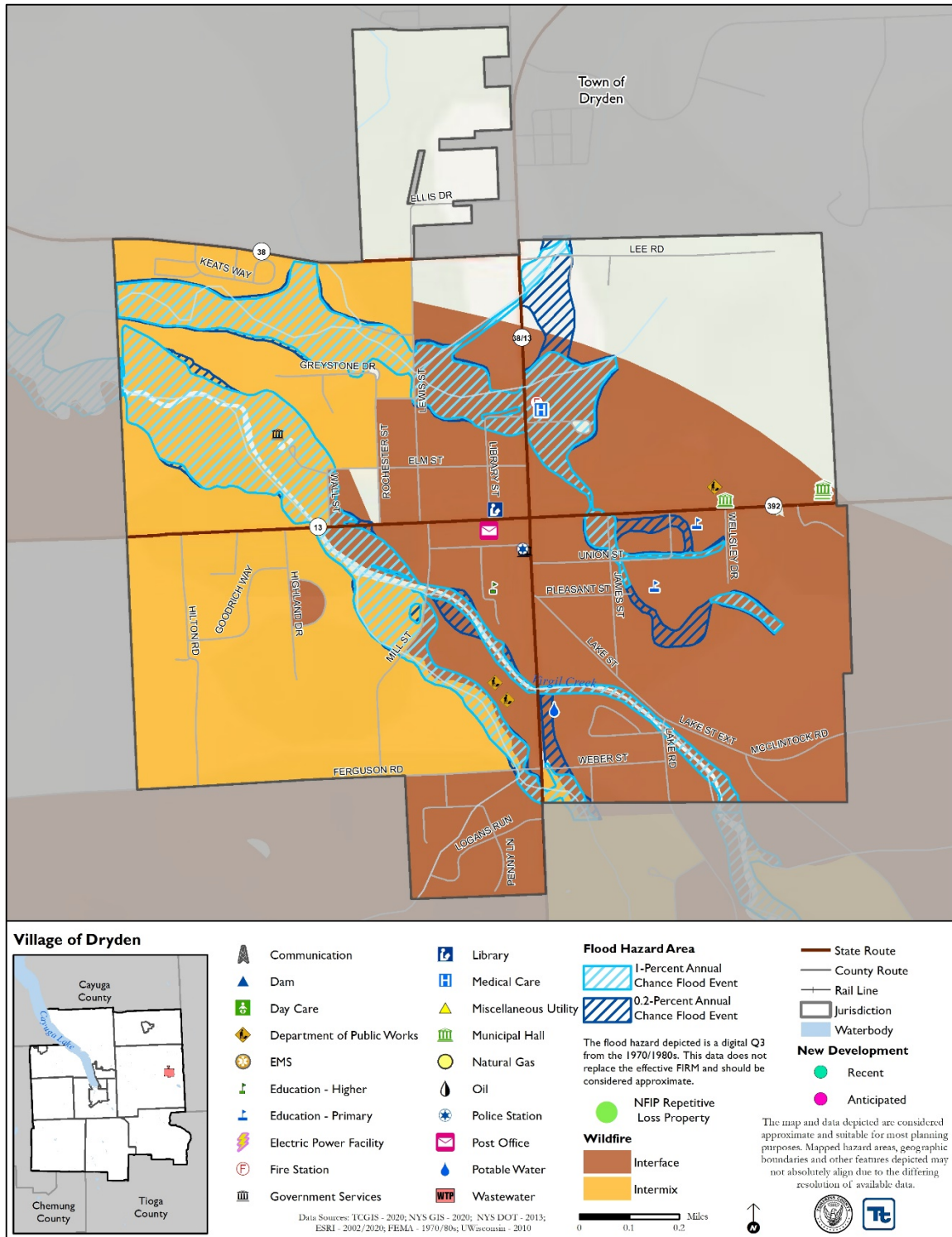
A hazard area extent and location map has been generated for the Village of Dryden that illustrates the probable areas impacted within the Village of Dryden. This map is based on the best available data at the time of the preparation of this plan, and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping



techniques and technologies, and for which the Village of Dryden has significant exposure. The map is illustrated below.



Figure 9.6-1. Village of Dryden Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Egypt Creek Flood Mitigation Project		
Project Number:	2021 - V Dryden - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	<p>Flooding is an annual problem along Egypt Creek in the Village of Dryden. Increased runoff from expanding development, sediment clogged channels, and undersized culverts that cannot convey increased flows contribute to the problem. Problems related to Egypt Creek include:</p> <ul style="list-style-type: none"> The Neptune Hose Co. #1 Fire Station, the Village's fire service, has experienced flood damage multiple times caused by Egypt Creek. The Dryden Ambulance Service building which is attached to the fire hall has a 2-foot high elevation do to new flood requirements. A major flood would severely affect both services ability to operate. The following residential areas have experience Egypt Creek flooding: lower Lee Road by the undersized culvert, Lewis Street bridge area, Greystone Drive and Brookside Drive. 		
Action or Project Intended for Implementation			
Description of the Solution:	<ul style="list-style-type: none"> Conduct a hydraulic and hydrologic analysis of the North and South branches of Egypt Creek to develop solutions for attenuating the flow of upstream stormwater and develop an implementation plan. 		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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)			
Level of Protection:	High	Estimated Benefits (losses avoided):	Unsure
Useful Life:	NA	Goals Met:	Goal 3
Estimated Cost:	\$250,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	18 months
Estimated Time Required for Project Implementation:	18 months	Potential Funding Sources:	BRIC, HMGP, WQIP
Responsible Organization:	Village of Dryden, SWCD	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Upsize culverts, build levee near fire station	\$50,000	Will not be comprehensive and need



			to assess up and downstream impacts
	Invest in H&H study to more effectively invest public funds and adequately address regular flooding around Egypt Creek	\$250,000	Long term assessment of success across problem areas.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Egypt Creek Flood Mitigation Project	
Project Number:	2021 - V Dryden - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Increased protection of fire station
Property Protection	1	Reduced flooding to area residential properties
Cost-Effectiveness	1	Investing first in H&H study increases likelihood for success
Technical	0	Will require engineering assessment
Political	1	Regular concern from local residents
Legal	0	May require legal review
Fiscal	1	Overall will reduce adverse flood impact costs
Environmental	0	NA
Social	0	NA
Administrative	-1	Requires project management
Multi-Hazard	1	May have added water quality benefits
Timeline	1	Short implementation timeline
Agency Champion	1	Village is ready to advance project
Other Community Objectives	0	-
Total	7	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Village Waste Water Treatment Plant @ Virgil Creek Flood Mitigation Project		
Project Number:	2021 - V Dryden - 002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	<p>The Village of Dryden's waste water treatment plant is not protected from Virgil Creek flooding water.</p> <p>The waste water treatment plant would be shut down do to Virgil Creek flooding the three tanks in the field, (the DE chlorination tank, the digester tank and the chlorine contact tank). The devastation would be for the plant buildings to be flooded. The result would be the raw sewage to back up into homes and to overflow the sewer manholes in the street.</p>		
Action or Project Intended for Implementation			
Description of the Solution:	The proposal is to conduct an analysis to protect the plant which anticipates extending the existing levee 300 feet. This would provide flood protection 60 feet past the WWTP (Waste Water Treatment Plant) building.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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)			
Level of Protection:	High	Estimated Benefits (losses avoided):	Unsure
Useful Life:	NA	Goals Met:	Goal 4
Estimated Cost:	~\$300,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2 Years
Estimated Time Required for Project Implementation:	2 Years	Potential Funding Sources:	FEMA BRIC, HMGP. FMA
Responsible Organization:	Village of Dryden	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Build levee adjacent WWTP	\$100	Will not be comprehensive and will not assess up and downstream impacts
	Develop engineered analysis and build levee to protect WWTP	\$300,000	Long term assessment of success across problem areas.
Progress Report (for plan maintenance)			



Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	



Action Worksheet		
Project Name:	Village Waste Water Treatment Plant @ Virgil Creek Flood Mitigation Project	
Project Number:	2021 - V Dryden - 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Increased protection of WWTP
Property Protection	1	Increased protection of WWTP
Cost-Effectiveness	1	Investing first in study increases likelihood for success
Technical	0	Will require engineering assessment
Political	1	Regular concern from local residents
Legal	0	-
Fiscal	1	Overall will reduce adverse flood impact costs to critical infrastructure
Environmental	0	-
Social	0	-
Administrative	-1	Requires project management
Multi-Hazard	1	May have added water quality benefits
Timeline	1	Short implementation timeline
Agency Champion	1	Village is ready to advance project
Other Community Objectives	0	-
Total	7	
Priority (High/Med/Low)	High	



9.7 Town of Enfield

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

9.7.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Enfield’s hazard mitigation plan primary and alternate points of contact.

Table 9.7-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Stephanie Redmond, Enfield Town Supervisor Phone Number: 607-592-0131 Email: supervisor@townofenfield.org	Name/Title: Mary Cornell, Enfield Town Clerk Phone Number: 607-273-8256 Email: townclerk@townofenfield.org

9.7.2 Municipal Profile

The Town of Enfield is located in the west-central portion of Tompkins County, bordered by the Town of Ulysses to the north, the Town of Ithaca to the east, and the Town of Newfield to the South. Schuyler County lies to the west. Enfield is mostly rural, encompassing 37.4 square miles. Enfield Center is a small residential area, approximately seven miles west of the City of Ithaca that is also home to the Town Hall, Community Building, a Grange Hall, and the Fire Company. State Route 79 cuts across Enfield Center. The Enfield Falls, within Robert H. Treman State Park, are located in the southeastern part of Enfield. Treman State Park is a local natural recreational area and tourist attraction.

Enfield was first settled in 1804, formed from 36 lots given to Revolutionary War veterans, and registered as a township in 1820. Agriculture was the main industry through the 19th century. Enfield Valley Grange No. 295, a farmer organization encouraged by the federal government after the Civil War, was built in 1925 and was the only Grange in Tompkins County to be officially functioning by 1995. Many small businesses have thrived in Enfield. In 2019, retail establishments include a convenience store and gas station, and a dollar store.



The Town is governed by a Town Board, consisting of a Town Supervisor and four Board members. The Town Supervisor is elected for two-year terms, and members of the Board serve four-year terms. The Town Clerk/Tax Collector, and Highway Superintendent are also elected to serve two-year terms. Town Justice is elected for a term of four-years.

According to the 2014-2018 American Community Survey, the Town of Enfield has a population of 3,541.

9.7.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.7-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.7-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.7-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	10	NA	11	NA	8	NA	10	NA	7	NA
Multi-Family	0	NA	0	NA	1	NA	0	NA	1	NA
Other (commercial, mixed-use, etc.)	2	NA	0	NA	2	NA	3	NA	0	NA
Total	12	NA	11	NA	11	NA	13	NA	8	NA
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 2014 to Present										
None	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
None	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.



9.7.4 Capability Assessment

The Town of Enfield performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.7.4). The Town of Enfield identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.7.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.7-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p><i>Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i></p>					
Zoning Code	No	-	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"¹¹ or "in accordance with a comprehensive plan."¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level. *During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	2-12-2002	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730). *When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local		Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	-	Local		No
<p>Comment:</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.					
Growth Management Regulation	No	-	Local	Local Planning Board	No
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	?	Yes
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019					
Flood Damage Prevention Law	No	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA)	Local, State, Federal	?	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.					
Municipal Separate Storm Sewer System (MS4) Regulation	No	EPA Phase II Stormwater Rule	Federal	?	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No	-			Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Disaster Reconstruction Ordinance	No	-	-	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	Wind Law/Solar Addendum to Site Plan Review	-	Local	Code Enforcement/Town Board/Planning Board	No
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Town Board/Planning Board	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level.</p> <ul style="list-style-type: none"> Town of Enfield, NY, Comprehensive Plan – Draft, 11-01-2019. The Enfield Comprehensive Plan is a community effort to retain the unique qualities of the Town of Enfield, plan for its future growth and improvement, and manage change. Goals of the Plan include to; Decrease risk to management of Town resources; Increase public safety; Address hazard mitigation; Provide adequate public services; Utilize good land development planning principles; Protect land, air, soil and water resources within the Town through environmental planning and coordination with review and oversight of development activity; Protect land, air, soil, and water resources within the town through education and outreach; and Preserve recreational and natural areas. The Plan recommends the following actions to advance the Town's goals; Maintain the Emergency Management Plan in cooperation with Tompkins County and New York State; Ensure that emergency service providers are equipped and trained to respond safely and effectively to local emergencies; Educate the community regarding current and emerging public health issues and resources; Develop a Floodplain Management Plan or ordinance for the protection of homes and property of residents; Develop an Emergency Management Plan to protect the lives and property of residents; Protect the integrity and quality of water resources in the Town; Update and implement responsible subdivision, site design and development oversight to minimize environmental impacts within the Town. Residential, commercial, industrial, or agricultural development or redevelopment should meet or exceed federal, state, or local regulations to minimize impacts of soil erosion, storm water run-off, and pollution; Discourage activities which threaten environmental health; Protect the quality of surface and groundwater resources against degradation; and Encourage all practices which safeguard waterways from excessive erosion and sedimentation. The Plan states that Enfield is the only town in Tompkins County that has not identified 100-year floodplains for participation in the National Flood Insurance Program (NFIP), which is used to establish flood insurance premiums. However, a recommended Action in the Plan is to; Explore participation in the National Flood Insurance Program (NFIP) to mitigate and reduce the impact of flooding on private and public structures within the Town. <p>*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	Yes	General Municipal Law Section 99-g.	Local	Town Board	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Disaster Debris Management Plan	No	-	Local	Town Board	No
<p>Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</p>					
Floodplain or Watershed Plan	No	-	Local	Town Board	No
<p>Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</p>					
Stormwater Plan	No	-	Local	Planning	No
<p>Comment: Local Authority -Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</p>					
Open Space Plan	No	NYS Constitution -Article 9; Statute of Local Governments. Section 10 (7)	Local	Planning	Yes
<p>Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.</p>					
Urban Water Management Plan	No	-	-	-	No
<p>Comment:</p>					
Habitat Conservation Plan	No	-	-	-	No
<p>Comment: Laws related to habitat protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.</p>					
Economic Development Plan	No	-	-	-	No
<p>Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.</p>					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
<p>Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations</p>					
Community Wildfire Protection Plan	No	-	Local	-	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business development, etc.)	No	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
Comment: THIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	No
Comment:					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Other: Emergency Response Plan	No	-	Local		No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.7-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes/Code Enforcement/Planning Board
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.7.4.2 Administrative and Technical Capability

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

Table 9.7-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	5 members/ 2 alternates
Mitigation Planning Committee		-
Environmental Board/Commission	Yes	Water Protection Committee Renewable Energy Development Committee
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	None	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	None	None
Engineers or professionals trained in building or infrastructure construction practices	None	None
Planners or engineers with an understanding of natural hazards	None	None



Resources	Available? (Yes or No)	Department/ Agency/Position
Staff with expertise or training in benefit/cost analysis	Board	Some board members can assist with this
Professionals trained in conducting damage assessments	None	None
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	None	None
Scientist familiar with natural hazards	Yes	Board Members
NFIP Floodplain Administrator (FPA)	No	No
Surveyor(s)	No	None
Emergency Manager	Yes	Supervisor
Grant writer(s)	Yes	Board members
Resilience Officer	None	None
Other		

9.7.4.3 Fiscal Capability

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

Table 9.7-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	None
Capital improvements project funding	Reserves
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	None
Impact fees for homebuyers or developers of new development/homes	None
Stormwater utility fee	None
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	WQIP Currently for Salt Barn/ NYSERDA for solar
Open Space Acquisition funding programs	None
Other	

9.7.4.4 Education and Outreach Capability

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

Table 9.7-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Town Clerk/ Town Website/ Swift 911
Personnel skilled or trained in website development?	Town Supervisor
Hazard mitigation information available on your website; if yes, describe	None at this time



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No Town authorized social media/ Swift911 is enabled for the Town of Enfield
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Nonactive at this time
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	None
Warning systems for hazard events; if yes, briefly describe.	Swift911
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Only the County plan we participate in
Other	No

9.7.4.5 Community Classifications

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

Table 9.7-8. 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	-	-
NYSDEC Climate Smart Community	Yes	Bronze	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.7.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.



Table 9.7-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High Capacity exists and is in use

Medium Capacity may exist; but is not used or could use some improvement

Low Capacity does not exist or could use substantial improvement

Unsure Not enough information is known to assign a rating

9.7.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

The Town would like to participate on the NFIP but s more information on Town’s current standing and information on how to become an official member. Therefore, the following questionnaire is not applicable for the Town of Enfield.

Note that the town has created a mitigation action to join the NFIP program – Action Number 007.

Table 9.7-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	NA
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	NA
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	NA
How do you make Substantial Damage determinations?	NA



NFIP Topic	Comments
<ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	
<p>How many properties have been mitigated (elevation or acquisition) in your jurisdiction?</p> <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	NA
<p>Do your flood hazard maps adequately address the flood risk within your jurisdiction?</p> <ul style="list-style-type: none"> If not, state why. 	NA
Resources	
What local department is responsible for floodplain management?	NA
Are any certified floodplain managers on staff in your jurisdiction?	NA
Do you have access to resources to determine possible future flooding conditions from climate change?	NA
<p>Does your floodplain management staff need any assistance or training to support its floodplain management program?</p> <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	NA
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	NA
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	NA
What are the barriers to running an effective NFIP program in the community, if any?	NA
Compliance History	
<p>Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?</p> <ul style="list-style-type: none"> If so, state the violations. 	NA
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	NA
Regulatory	
<p>What is the local law number or municipal code of your flood damage prevention ordinance?</p> <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	NA
<p>Does your floodplain management program meet or exceed minimum requirements?</p> <ul style="list-style-type: none"> If exceeds, in what ways? 	NA
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	NA



NFIP Topic	Comments
flood risk when reviewing variances such as height restrictions?	
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No but would be interested in participating

9.7.4.8 National Flood Insurance Program (NFIP) Summary

The town of Enfield does not participate in the NFIP program and therefore does not have any policies or claims, according to 2020 NFIP records.

Table 9.7-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Not participating at this time					

Source: FEMA 2020
 Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of February 28, 2018. The total number of repetitive loss properties does not include severe repetitive loss properties
 RL=Repetitive Loss; SRL=Severe Repetitive Loss

9.7.4.9 Additional Areas of Existing Integration

The Town of Enfield contracts with the Enfield Volunteer Fire Company for Fire, EMS, natural disaster response and other emergencies. A tax levy is administered to cover the expenses.

Local Law No. 1 of 2013, the "Prohibition Within the Town of Gas And Petroleum Exploration And Extraction Activities, Underground Storage Of Natural Gas, and Disposal Of Natural Gas Or Petroleum Extraction, Exploration, And Production Wastes" is the culmination of a two year effort by an engaged Enfield community to show that heavy industry of this type is not compatible with the preservation of Enfield's rural character. In other regulations, the Town's Site Plan Review process calls on the Planning Board to protect to the extent possible the important natural open space and scenic resources of the town, including woodlands, stream corridors, wetlands and steep slope areas.

In terms of planning, the Town of Enfield has identified the interest in ensuring their emergency management planning efforts are coordinated with Tompkins County and New York State. Added updates to this effort will further integrate resources developed as a part of this mitigation planning effort.



9.7.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Town of Enfield does not have any designated emergency evacuation routes but State Route 79 would be considered the primary road used during certain emergency events. As evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The following is a potential shelter in the Town. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.7-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Enfield Community Center	162 Enfield Main Road	200-300	Yes	Yes	No	No	6400 SF, handicapped accessible, restrooms, large private parking lot, Great room and four smaller spaces, certified kitchens

Temporary Housing

Although the Town of Enfield has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event



temporary housing is needed, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.



Table 9.7-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Although the Town of Enfield has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired, the Town may look into a partnership with Robert Treman State Park Could be pursued for temporary housing options.					

Permanent Housing

While the Town of Enfield did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town of Enfield can utilize this analysis to identify potential locations.

Table 9.7-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
None identified at this time.					

9.7.5 Hazard Event History Specific to the Town of Enfield

Town of Enfield has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected Tompkins County and its municipalities. The County's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Town of Enfield. Table 9.7-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.



Table 9.7-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	<p>Following a flooding event, extensive damage had occurred from Enfield Creek along Trumbulls Corners Road. Shoulders from the bridge were damaged and excessive erosion occurred. Nearby homes and garages were flooded. TCSWCD worked with the Highway dept to repair the streambank, including tree planting along approximately 1 mile of roadway.</p> <p>Following an extreme flash flooding event, major damage had occurred to the roadway and ditches, including many driveway culverts being torn out. Homes also were flooded with water and excessive sediment. Culverts were repaired and check dams were installed along the hill to slow down future storm water events.</p> <p>Following damage from a flooding event, riprap was installed in approximately a 1/4 mile of road ditches.</p>
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	None



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	None
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	None
October 31-November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		None

Notes:

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

9.7.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Enfield’s risk assessment results and data used to determine the hazard ranking.

9.7.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).



According to HAZUS MH there are no critical facilities located within the 1% or 0.2% change flood zone, based on analysis conducted in 2020. Therefore the following table is left blank.

Table 9.7-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
None				

Source: XXXX

9.7.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each municipality 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 Enfield. The Town of Enfield has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Enfield indicated the following:

- Flooding is the highest concern in the Town and the Town concurs with the ranking identified in the broader plan.

Table 9.7-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	High
Invasive Species	Medium
Ground Failure	Low
Severe Storm	High
Severe Winter Storm	High
Wildfire	Low

Note: The scale is based on the following hazard rankings as established in Section 5.3.



9.7.6.3 Identified Issues

The Town of Enfield has identified the following vulnerabilities within their community:

- Flooding is one of the highest areas of concern for the Town. The Town is looking to participate in the NFIP program

Specific areas of concern based on resident response to the Town of Enfield Hazard Mitigation Citizen survey include:

- Lake Front properties are most vulnerable.
- West End of Hayts Road is vulnerable to flooding.
- Flooding of Octopus area and route 13 is a significant area of vulnerability.

9.7.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.7.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.7-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	-	
E1		Flash Flood	Town of Enfield	Become participating member of NFIP	In progress	Level of Protection	-	Have not received official notice on current NFIP membership status from FEMA. May consider participation in 2020-2021.
						Damages Avoided; Evidence of Success	-	



9.7.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Enfield has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Culvert rightsizing in various locations.
- Ditch mapping for erosion.
- Enfield participates in and has access to Tompkins County's Swift 911 Program. Currently we do not utilize this very much but could in an emergency. The Town Clerk is enrolled to put out messages. A link to Enroll is featured prominently on the Town Website. Additionally upon adoption many local landline phones were enrolled. A goal could be to increase enrollment and develop protocols for use.
- Enfield is currently working with the NY Rural Water Association to help assess local water quality and quantity issues associated with groundwater. Free support to develop water quality plans and may result in water protection ordinance. Uses DoH test well information to assess demand and have developed survey to determine what % town is dealing with water issues.

9.7.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Enfield participated in a mitigation action workshop in 2020.

Table 9.7-19 summarizes the comprehensive range of specific mitigation initiatives the Town of Enfield would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.7-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.7-19. 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
2021-T. Enfield-001	Develop Emergency Shelter	1,4	All Hazards	<p>Problem: The Town does not have any designated emergency shelter or temporary housing location. However, the Fire Company building is designated as a disaster relief center and communication center.</p> <p>Solution: Establish a preexisting facility or develop a facility that could provide shelter during extreme weather events and that has backup power. Also establish agreements with landowners and or acquire a property for temporary housing.</p>	No	No	Medium	Town DPW	High	High	HMGP, HMA Municipal DPW Budget as needed	High	SIP	SP
2021-T. Enfield-002	Severe Snow Gust Reduction	1,3, 4	Severe Winter Storms	<p>Problem: The Town of Enfield experiences strong snow gusts and snow drifts throughout much of the town due to the municipality's overall rolling/flat topographical characteristics.</p> <p>Solution: Conduct a study to assess roads that are most heavily impacted by snow gusts and drifts and develop an action plan to address these issues through actions such as planting permanent</p>	No	No	Medium	Town DPW	Medium	High	HMA, Municipal DPW Budget	High	SIP	SP



Table 9.7-19. 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
				vegetative barriers along main arterials such as route 79.										
2021-T. Enfield-003	Emergency Service Mutual Aid Establishment	1,4, 5	All Hazards	<p>Problem: The Town does not have its own emergency management services. However, the Town of Enfield has EMTs through the Fire Company, a BLS First Response EMS Squad. Currently have 5 EMTs and a CFR (Certified First Responder). As part of that training all have FEMA Certifications ICS 100, 200, and 700.</p> <p>Solution: While the Town could establish its own emergency services, increasing collaborative efforts with regional EMT services such as Bangs Ambulance to increase overall capacity could be an adequate action. Some immediate goals related to Enfield EMS would include: Tactical Vests for EMS Crews to increase responder safety and confidence on calls, Ongoing replacement of AED units, a small Bunk Room to decrease response times, efforts to increase</p>	No	No	Long	Town Board and EMS	Medium	High	HMA, Municipal Budget	High	LPR	ES



Table 9.7-19. 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
				Recruitment and Retention of EMS providers, and a set of CPR Mannequins to do in house CPR training as well as offer training to the Community.										
2021-T. Enfield-004	Culvert Replacement	1,3,4	Flood	<p>Problem: Culverts under private driveways on Harvey Hill after the bridge and at the intersection of Bostwick Rd and Enfield Main Rd are eroding.</p> <p>Solution: The Town will conduct a feasibility study to determine the cause of the culvert erosion and if increased capacity will mitigate the erosion issues. Once the best alternative is determined, the Town will create an action plan to upgrade culverts along Harvey Hill, Bostwick, and Enfield Main Road.</p>	No	No	Short	Town DPW	Medium	High	HMGP, HMA, BRIC	High	SIP	SP
2021-T. Enfield-005	Power Supply Retrofitting	1,5	Severe Storms	<p>Problem: The power supply serving households in southern Enfield, particularly along Gray [note spelling] and Cole Grove Roads and NY 327, needs upgrading. Electricity to those homes is fed via an aging feed line that traverses Enfield Gorge through forests and is</p>	No	No	Medium	Town Board/ NYSEG	Medium	High	NYSERDA CEC Program	High	SIP	SP



Table 9.7-19. 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
				difficult for repair crews to access during winter weather. This line is frequently severed during summer and winter storms by falling trees. Solution: Feeding power to this neighborhood via a more modern, more easily accessible line, fed from a different access point, would improve electrical reliability and better protect lives and property during emergencies.										
2021-T. Enfield-006	Backup power installation at DPW	1,5	All Hazards	Problem: The highway building is a critical facility in need of a back-up generator in the event of power failure. Solution: Installation of a 75-100 kW diesel generator.	Yes	No	Short	Town Supervisor and DPW	Medium	High	HMA, HMGP, BRIC	High	SIP	SP
2021-T. Enfield-007	Join NFIP	All Goals	Flood	Problem: The municipality currently does not participate in the NFIP program but would like to become a member. Solution: Join the NFIP-review and accept current maps, adopt a flood damage prevention ordinance, and assign a floodplain administrator for the town.	No	No	1 year	Town Supervisor	Low	High	General municipal Budget, HMGP	High	LPR	PR
2021-T. Enfield - 008	Enfield Creek at Bostwick Road Stream Restoration	1,3	Flood	Problem: Erosion caused by flooding is causing infrastructure damage, water quality issues, and regional	No	Yes	3 Years	Tompkins County Soil and Water Conservation	~\$100,000	Functional Road and Restored	DEC WQIP, FEMA BRIC,	Low	NSP	NR



Table 9.7-19. 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
	and Infrastructure Improvement			flood risk on Bostwick Road at Enfield Creek in the Town of Enfield. Solution: Implement stream restoration and associated infrastructure improvements to improve stream function and reduce the number of times the stream breaches the road.				District, Town of Enfield Highway		Stream Corridor	HMGP, Local Funds			
2021-T. Enfield – 009	Back-up Generator and commercial kitchen for Enfield Community Council Building	1,5	Severe Storm	Problem: The Enfield Community Council provides important services in our town. Providing power and kitchen facilities to this building would provide an emergency shelter. Solution: Installation of 10kw generator and certified commercial kitchen to increase resiliency	Yes	No	3 Years	Town of Enfield	\$40,000	High	HMGP, BRIC	High	SIP	SP
2021-T. Enfield – 010	Back-up Generator for Enfield Valley Grange and making	1,5	Severe Storm	Problem: The Enfield Valley Grange provides an important community space. To make it more accessible, it is important	No	No	3 Years	Town of Enfield	\$100,000	High	HMGP, BRIC	High	SIP	SP



Table 9.7-19. 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
	space handicap accessible			to upgrade the facility to be handicap accessible. The facility also needs a backup power system Solution: Installation of 10kw generator and certified commercial kitchen to increase resiliency										

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
 PDM Pre-Disaster 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*



Table 9.7-20. 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	Total	High / Medium / Low
2021-T. Enfield-001	Develop Emergency Shelter	1	1	1	1	1	0	-1	1	1	1	1	1	1	1	11	High
2021-T. Enfield-002	Severe Snow Gust Reduction	1	1	1	1	1		-1	1	1	1	1	0	1	1	11	High
2021-T. Enfield-003	Emergency Service Mutual Aid Establishment	1	1	1	0	1	0	0	0	1	1	1	1	1	1	10	High
2021-T. Enfield-004	Culvert Replacement	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T. Enfield-005	Power Supply Retrofitting	1	1	1	1	0	0	0	1	1	1	1	1	1	1	12	High
2021-T. Enfield-006	Backup power installation at DPW	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-T. Enfield-007	Join NFIP	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2021-T. Enfield-008	Enfield Creek at Bostwick Road Stream Restoration and Infrastructure Improvement	0	1	1	0	0	1	0	0	0	0	1	0	0	0	4	Low
2021-T. Enfield-009	Back-up Generator and commercial kitchen for Enfield Community Council Building	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-T. Enfield-010	Back-up Generator for Enfield Valley Grange and making space	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High



Table 9.7-20. 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	Total	High / Medium / Low
	handicap accessible																

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.7.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.7-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak	003	001; 006							001; 006	003
Drought	003	001; 006							001; 006	003
Extreme Temperature	003	001; 006							001; 006	003
Flood	003; 007	001; 004; 006	008		007			008	001; 004; 006	003
Harmful Algal Bloom	003	001; 006							001; 006	003
Invasive Species	003	001; 006							001; 006	003
Ground Failure	003	001; 006							001; 006	003
Severe Storm	003	001; 005; 006; 009; 010							001; 005; 006; 009; 010	003
Severe Winter Storm	003	001; 002; 006							001; 002; 006	003
Wildfire	003	001; 006							001; 006	003

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.7.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Enfield followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Town Supervisor and Code Enforcement Office. The Supervisor represented the community on the Town of Enfield 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.



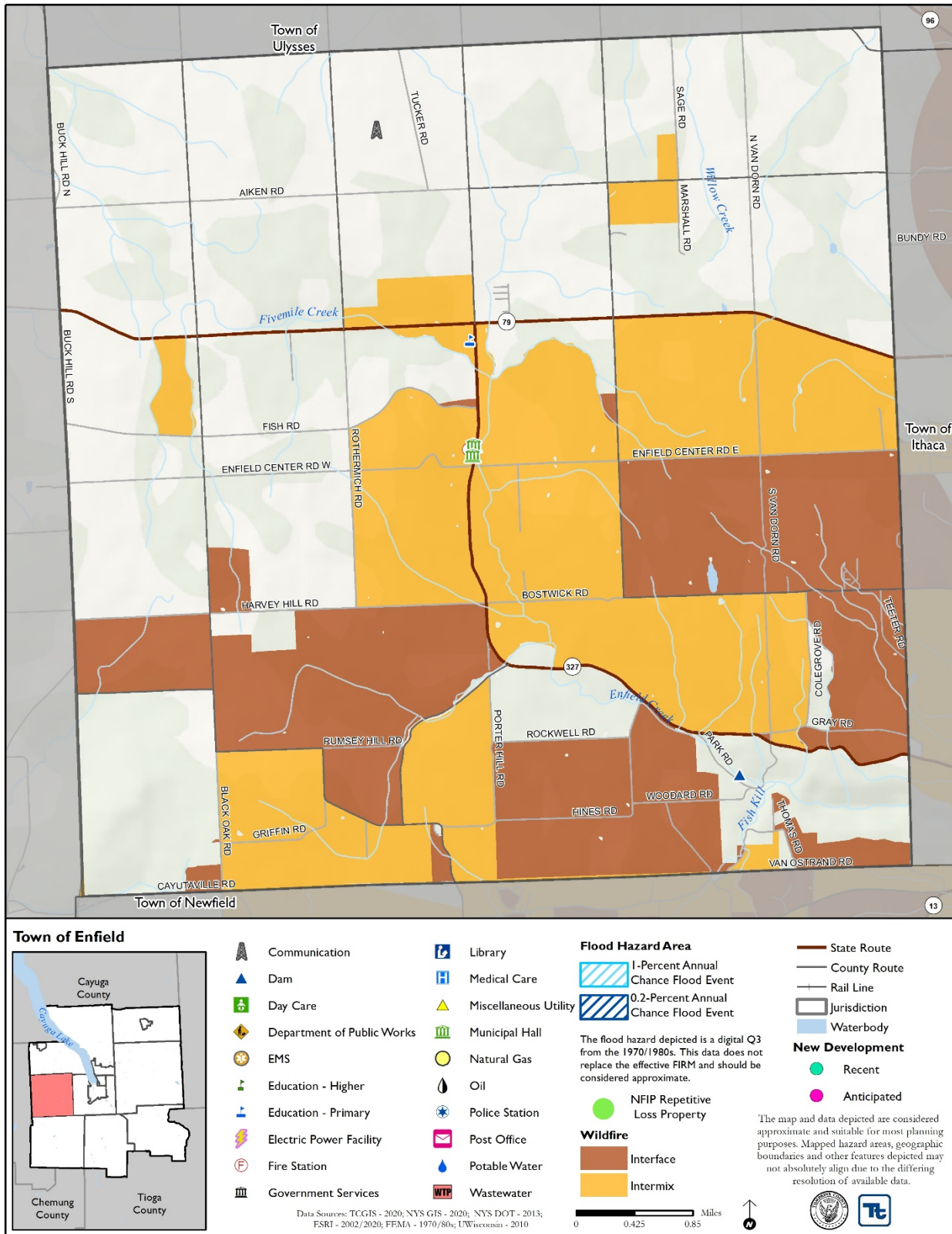
Additional documentation on the Town of Enfield’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.7.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Enfield that illustrates the probable areas impacted within the Town of Enfield. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Enfield has significant exposure. The map is provided on the next page.



Figure 9.7-1. Town of Enfield Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Culvert Replacement		
Project Number:	2021-T. Enfield-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Culverts under private driveways on Harvey Hill after the bridge and at the intersection of Bostwick Rd and Enfield Main Rd are eroding. This is causing road closures due to severe overflow of water as well as property damage.		
Action or Project Intended for Implementation			
Description of the Solution:	The Town will conduct a feasibility study to determine the cause of the culvert erosion and if increased capacity will mitigate the erosion issues. Once the best alternative is determined, the Town will create an action plan to upgrade culverts along Harvey Hill, Bostwick, and Enfield Main Road.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	high	Estimated Benefits (losses avoided):	Reduced flood/ car accidents
Useful Life:	25 years	Goals Met:	1,3 ,5
Estimated Cost:	\$100,000	Mitigation Action Type:	Structural and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	HMGP, HMA, BRIC
Responsible Organization:	Town of Enfield	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Close road	High	Road flooding will be ignored and landowners will need to be relocated.
	Culvert replacement	Medium	Best alternative
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet



Project Name:	Culvert Replacement	
Project Number:	2021-T. Enfield-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Back-up Generator for Highway Building		
Project Number:	2021-T. Enfield-006		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The highway building is a critical facility in need of a back-up generator in the event of power failure. Without backup power, the facility cannot operate in an effective manner and a disruption in services could be a major issue.		
Action or Project Intended for Implementation			
Description of the Solution:	Installation of a 75-100 kW diesel generator at DPW garage. The site needs to be closely examined beforehand to make sure it is not in a potential hazard zone. If it is, necessary retrofitting would need to be conducted.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	High	Estimated Benefits (losses avoided):	Continued operation
Useful Life:	25 years	Goals Met:	1,5
Estimated Cost:	\$15,000	Mitigation Action Type:	Structural and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	5 years
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	HMGP; HMA; BRIC
Responsible Organization:	Town of Enfield	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	5 kW Battery Backup Generator	\$15,000	Not Reliable
	Generator	\$15000	Best alternative
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Back-up Generator for Highway Building	
Project Number:	2021-T. Enfield-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	0	The town is not able to fund the project without any external assistance.
Environmental	1	This project has no adverse impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	13	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Back-up Generator and commercial kitchen for Enfield Community Council Building		
Project Number:	2021-T. Enfield-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm		
Description of the Problem:	The Enfield Community Council provides important services in our town. Providing power and kitchen facilities to this building would provide an emergency shelter.		
Action or Project Intended for Implementation			
Description of the Solution:	Installation of a 10kW generator and a certified kitchen. This action would need to be prioritized to ensure that the community will have adequate shelter during a hazard event. The municipality shall conduct any additional research needed to install the generator. Any funding from HMGP shall be used for generator installation and purchasing only.		
Is this project related to a Critical Facility?	Yes	No	X
Is the critical facility located in the 1% annual chance flood area?	Yes	No	X
(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:	high	Estimated Benefits (losses avoided):	Proper shelter and FEMA compliance
Useful Life:	25 years	Goals Met:	1,2
Estimated Cost:	\$40,000	Mitigation Action Type:	power
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	5 years
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	grants



Responsible Organization:	Town of Enfield	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Build new emergency facility	High	More expensive
	Install generator and kitchen	Moderate	Less expensive
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Back-up Generator and commercial kitchen for Enfield Community Council Building	
Project Number:	2021-T. Enfield-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project protects life



Property Protection	1	This project protects property
Cost-Effectiveness	1	This project is most cost effective
Technical	1	No technical issues
Political	1	No political issues
Legal	1	No legal issues
Fiscal	1	No fiscal issues – town has adequate funding
Environmental	1	The project has a positive environmental impact
Social	1	This project has a positive social impact
Administrative	1	There are adequate administrative capabilities
Multi-Hazard	1	This project addresses multiple types of hazards
Timeline	1	The timeline is adequate
Agency Champion	1	Town DPW
Other Community Objectives	1	Sustainability and emergency management
Total	14	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Back-up Generator for Enfield Valley Grange and making space handicap accessible		
Project Number:	2021-T. Enfield-010		
Risk / Vulnerability			
Hazard(s) of Concern:	The grange is not handicap accessible and needs back up power. This facility is used for various functions and is categorized as an essential facility. The continued operations are essential to community/ municipal operations and is needed to be fully accessible at all times.		
Description of the Problem:	The Enfield Valley Grange provide and important community space. To make it more accessible, it is important to upgrade the facility to be handicap accessible. The facility also needs a backup power system		
Action or Project Intended for Implementation			
Description of the Solution:	Installation of a 10kW generator and upgrades to make the facility handicap accessible		
Is this project related to a Critical Facility?	Yes	No	X
Is the critical facility located in the 1% annual chance flood area?	Yes	No	X
(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:	high	Estimated Benefits (losses avoided):	Continued Operation
Useful Life:	25 years	Goals Met:	1,2
Estimated Cost:	\$100,000	Mitigation Action Type:	power
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	5 years
Estimated Time	3 years	Potential Funding Sources:	HMGP



Required for Project Implementation:			
Responsible Organization:	Town of Enfield	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Develop New Facility	High	More expensive
	Generator	High	Most cost effective
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Back-up Generator for Enfield Valley Grange and making space handicap accessible	
Project Number:	2021-T Enfield-010	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project protects property
Property Protection	1	This project is most cost effective
Cost-Effectiveness	1	No technical issues
Technical	1	No political issues
Political	1	No legal issues
Legal	1	No fiscal issues – town has adequate funding
Fiscal	1	The project has a positive environmental impact
Environmental	1	This project has a positive social impact
Social	1	There are adequate administrative capabilities
Administrative	1	This project addresses multiple types of hazards
Multi-Hazard	1	The timeline is adequate
Timeline	1	Town DPW
Agency Champion	1	Sustainability and emergency management
Other Community Objectives	1	This project protects property
Total	14	
Priority (High/Med/Low)	High	



9.8 VILLAGE OF FREEVILLE

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

9.8.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Freeville’s hazard mitigation plan primary and alternate points of contact.

Table 9.8-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Jason Cuykendall, Deputy Mayor Address: 5 Factory St., P.O. Box 288, Freeville, NY Phone Number: 607-838-3645 Email: jason@redbarns.net	Name/Title: David Fogel, Mayor Address: 5 Factory St., P.O. Box 288, Freeville, NY Phone Number: 607-844-6110 Email: dmfl10421@gmail.com
NFIP Floodplain Administrator	
Name/Title: Rick Fritz, Code Enforcement Official Address: 5 Factory St., P.O. Box 288, Freeville, NY Phone Number: 607-591-9898 -Email: deputyclerk@freevilleny.org	

9.8.2 Municipal Profile

The Village of Freeville is located about 10 miles from each Ithaca and Cortland. Located within the Town of Dryden, Freeville encompasses one square mile, surrounded by open space to the east, wetlands to the south and west, and farmland to the north. Less than half of the Village is developed. Freeville is the only incorporated municipality in the nation with this name.

Two settlers bought land on either side of Fall Creek in the early 19th century, and the land between them would later become the village of Freeville. Due to the Fall Creek Valley, Freeville became the location for a railroad junction and by the mid-1870s, was home to 200 people, a church, two hotels, and several shops. Freeville was incorporated as a village in 1887 and thrived through the end of the century. A major fire in 1931 destroyed many homes and businesses in Freeville; and a flood in July 1935 ravaged much of the region. With



increased mobility and access to nearby towns, there has been a gradual decline in commercial activity. There is no longer a grocery store, nor gas station in Freeville.

The Village of Freeville is governed by a Mayor and a four-person Board of Trustees. The Mayor and Trustees are elected officials. The Mayor appoints members of the Planning Board, and Zoning Board of Appeals to be approved by the Trustees.

According to the 2014-2018 American Community Survey, the Village of Freeville population is 501.

9.8.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.8-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. At the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.8-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	-	N/A	-	N/A	1	N/A	00	N/A	0	N/A
Multi-Family	-	N/A	-	N/A	0	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	-	N/A	-	N/A	0	N/A	0	N/A	0	N/A
Total	0		0		1		0		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 2014 to Present										
N/A										
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Unknown										

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.



9.8.4 Capability Assessment

The Village of Freeville performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.
-

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.8.4). The Village of Freeville identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review and the answers to integration survey questions.

9.8.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.8-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</p>					
Zoning Code	Yes	Not Available Online	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"¹¹ or "in accordance with a comprehensive plan."¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Article VI of Land Use Plan	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazard.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local		Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	NA	Local		No
<p>Comment:</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.					
Growth Management Regulation	No	NA	Local	Local Planning Board	No
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Village updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	?	Yes
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019					
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA)	Local, State, Federal	Code & Zoning Official	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.					
Municipal Separate Storm Sewer System (MS4) Regulation	No	EPA Phase II Stormwater Rule	Federal	NA	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No	NYS Executive Law, Article 75	Local	NA	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	NA	Local	NA	No
Comment:					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Disaster Reconstruction Ordinance	No	NA	Local	NA	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	None	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Village Planning Board	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level 2013 - http://www.freevilleny.org/wp-content/uploads/sites/2/2017/01/COMPREHENSIVE-PLAN-13.pdf. *When the Village updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	NA	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	NA	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	No	-	Local	NA	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	No	-	Local	NA	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)	Local	NA	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	NA	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment:					
Habitat Conservation Plan	No	-	Local	NA	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	NA	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	?	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	None	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM and Town of Dryden Code Enforcement	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Plan is in coordination with the Town of Dryden's CEMP. *When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	-
Comment:					
Other: Emergency Response Plan	Yes	-	Local		No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS. Plan in coordination with the Town of Dryden's effort.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.8-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Clerk's Office
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.8.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Freeville.



Table 9.8-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	Planning Board
Open Space Board/Committee	No	Planning Board
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Swift 911
Maintenance programs to reduce risk	Yes	DPW
Mutual aid agreements	No	Hand shake agreements in place
Technical/Staffing Capability		
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	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other		

9.8.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Freeville.

Table 9.8-6. 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 – Village sewer fee; all Village on own well
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



Financial Resources	Accessible or Eligible to Use (Yes/No)
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No – however Village has acquired various streamside parcels for creating adequate buffers to Fall Creek
Other	

9.8.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Freeville.

Table 9.8-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	No
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes, Planning Board addresses some of these issues
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No significant coordinated systems
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	

9.8.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Freeville.

Table 9.8-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NA	NA
Building Code Effectiveness Grading Schedule (BCEGS)	No	NA	NA
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Freeville Fire Dept	
NYSDEC Climate Smart Community	No		
Storm Ready Certification	No		
Firewise Communities classification	No		



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Other			

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.8.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.8-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Low
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Low
Invasive Species	Low
Severe Storm	Medium
Severe Winter Storm	High

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating

9.8.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Rick Fritz, Village Code Enforcement Officer

Table 9.8-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> • Do you maintain a list of properties that have been damaged by flooding? 	Areas along Fall and Virgil Creek, no list of damaged properties.



NFIP Topic	Comments
<p>Do you maintain a list of property owners interested in flood mitigation?</p> <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
<p>Are any RiskMAP projects currently underway in your jurisdiction?</p> <ul style="list-style-type: none"> If so, state what projects are underway. 	Yes – active, anticipated for conclusion 2022.
<p>How do you make Substantial Damage determinations?</p> <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	NA
<p>How many properties have been mitigated (elevation or acquisition) in your jurisdiction?</p> <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	0
<p>Do your flood hazard maps adequately address the flood risk within your jurisdiction?</p> <ul style="list-style-type: none"> If not, state why. 	Yes
Resources	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<p>• If so, what type of assistance/training is needed?</p> <p>Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)</p>	Permit reviews, inspections, engineering capability
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	NA
What are the barriers to running an effective NFIP program in the community, if any?	None
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<p>• If so, state the violations.</p> <p>When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?</p>	02/26/2018
Regulatory	



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> 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? <ul style="list-style-type: none"> 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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No

9.8.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Freeville.

Table 9.8-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Village of Freeville	7	4	\$17,760	1	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL=Repetitive Loss; SRL=Severe Repetitive Loss

9.8.4.9 Additional Areas of Existing Integration

Mitigation plan work in the Village will be integrated with several planned Public Works projects. Aspects of the current Village of Freeville Comprehensive Plan integrates mitigation planning by calling for its zoning to regulate development in floodplains through its zoning regulation. It further recommends a buffer zone between any commercial or residential development and the banks of Fall Creek or its tributaries, and this concept should be considered during the evaluation of site-plan proposals for such development. As the comprehensive plan is updated, key aspects of this hazard mitigation plan update will be utilized in the development of its policies and actions.



9.8.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The State highways that cut through the Village (366 and 38) are relied on for evacuation routes. Evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Village will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

Village Fire Department designated as a shelter. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.8-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Village Fire Department	-	-	-	-	-	-	-

Temporary Housing

Based on the size of the Village, there is very limited land available for temporary housing. Therefore, the Village of Freeville has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the [] will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.8-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type
There are no temporary housing locations identified. Due to its size the Village would have to rely on spaces identified in the surrounding Town of Dryden.				



Permanent Housing

Based on the size of the Village, there is very limited land available for permanent housing. While the Village did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Village can utilize this analysis to identify potential locations.

Table 9.8-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are no locations for permanent housing in the Village. Due to its size and its extent of natural resources just a few vacant parcels in the Village are available for safe, permanent redevelopment. The Village would otherwise have to rely on redevelopment in the surrounding Town of Dryden.					

9.8.5 Hazard Event History Specific to the Village of Freeville

Village of Freeville has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the Village. The Village of Freeville's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Village of Freeville. Table 9.8-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.8-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
May 13-22, 2014	Severe Storms and Flooding (DR-4180)	Yes	On May 16, heavy rainfall resulted in flash flooding and washed out roads.	Although the Village was impacted, the Village of Freeville did not report any damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Although the Village was impacted, the Village of Freeville did not report any damages.
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Although the Village was impacted, the Village of Freeville did not report any damages.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Although the Village was impacted, the Village of Freeville did not report any damages.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Although the Village was impacted, the Village of Freeville did not report any damages.
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		Although the Village was impacted, the Village of Freeville did not report any damages.

Notes:

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



9.8.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Village of Freeville’s risk assessment results and data used to determine the hazard ranking.

9.8.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.8-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
There are no critical facilities in Freeville located in flood prone areas.				

9.8.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each municipality 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 Freeville. The Village of Freeville has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Freeville indicated the following:

- Floods remain a consistent concern for the Village. With two creeks, a valley location and high water table, flooding can happen frequently. The Village overall concurs with the hazard rankings, but does feel that Harmful Algal Blooms are not applicable to the Village and thus has low concern..

Table 9.8-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Low
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Low/NA
Invasive Species	Low
Severe Storm	Low
Severe Winter Storm	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

**The Village of Freeville changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Village of Freeville*

9.8.6.3 Identified Issues

The Village of Freeville has identified the following vulnerabilities within their community:

- Floods and storms remain the largest vulnerability to the Village.

Specific areas of concern based on resident response to the Village of Freeville Hazard Mitigation Citizen survey include:

- Most respondents were concerned with drought or flooding.
- No respondent has been evacuated as a result of a hazard event.
- Survey respondents felt that the Fall Creek floodplain was a specific vulnerability in the Village.

9.8.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.



9.8.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.8-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
F1		Flash Flood, Severe Storm	Village of Freeville	Encourage Interagency collaboration in the humane management of beaver populations, particularly in Fall and Virgil Creeks	No longer issue	Cost	-	Do not include in update
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
F2		Flash Flood, Severe Storm	Village of Freeville	Address drainage issues near private homes along Virgil Creek		Cost	~\$20,000	Include but modify as actively monitor and remove debris from systems in and around former railroad bridges on Fall and Virgil Creeks.
						Level of Protection	NA	
						Damages Avoided; Evidence of Success	Temp benefit	



9.8.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Freeville has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- The Village of Freeville continually removes debris from under abandoned railroad bridges to help reduce flooding to nearby residential properties.

9.8.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Freeville participated in a mitigation action workshop in October 2020 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: e.g., 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).

Table **9.8-19** summarizes the comprehensive-range of specific mitigation initiatives the Village of Freeville would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.8-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.8-19. 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
2021- V Freeville - 001	Backup Power for Sewer Facilities	1	Severe Storm	<p>Problem: The sewer plant and several important pump stations do not have any backup power. If power is lost trucks need to come in and manually pump stations. This takes valuable resources away from other services during this time.</p> <p>Solution: New generator hookup for sewer plant and 4 generators at the ready for the four main pump stations.</p>	Yes	No	6 months	Village of Freeville	\$20,000	Consistent sewer service	BRIC?, HMGP	High	SIP	ES
2021- V Freeville - 002	Living Snow Fence on Fall Creek Road	3	Severe Winter Storm	<p>Problem: Because of open fields on both sides of road snow blows and drifts on the roadway which serves as key evacuation route creating a hazard in the winter.</p> <p>Solution: Plant trees to block wind and help with blowing snow will result in a safer roadway.</p>	No	No	3 months	Village of Freeville	\$2,500	?	County Stream Corridor Funds, SWCD	Med	NSP	NR
2021- V Freeville - 003	Material Management Plan for Flood Prevention	1, 4	Flood	<p>Problem: Trees and other items get hung up on RR trestles and cause ice dams and other water backup hazards. This lack of flow causes the creek to flood banks.</p> <p>Solution: The Village will conduct a field survey to document problem areas, source of problems, and solutions to mitigate frequent and damaging water back up and ice dams to identify the needs and key resources to develop a programmatic stream management program maintenance in order to reduce flood risk. This could Likely</p>	No	Yes	1 year	Village of Freeville	\$10,000	?	DEC WQIP	Low	NSP	NR



Table 9.8-19. 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
				to include regular need for buying or renting procurement or lease of specialized equipment										
2021- V Freeville - 004	Village Fall Creek Stream Buffer Protection	2,3	Flood	<p>Problem: Development of vacant parcels in and around the floodplain of Fall Creek</p> <p>Solution: Develop a Village policy to acquire vacant parcels in the regulatory floodplain to eliminate further development in floodprone areas and to create opportunities for natural flood attenuation and open space. In addition the Village will explore the adoption of a streamside buffer law for added protection.</p>	No	No	6 months	Village of Freeville	\$1,000	?	NA	Med	LPR	PR

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
- PDM Pre-Disaster 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



Table 9.8-20. 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	Total	High / Medium / Low
2021- V Freeville – 001	Backup Power for Sewer Facilities	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2021- V Freeville – 002	Living Snow Fence on Fall Creek Road	1	1	1	0	1	0	0	1	1	0	0	1	0	1	8	Medium
2021- V Freeville – 003	Material Management Plan for Flood Prevention	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021- V Freeville - 004	Village Fall Creek Stream Buffer Protection	1	0	1	0	-1	-1	0	1	1	0	0	0	0	0	2	Low

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.8.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.8-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Flood	004		003; 004		004			003; 004		
Severe Storm		001	002					002	001	

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.8.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Freeville followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Code Enforcement, Clerks Office and Village Trustees. Jason Cuykendall, Village Trustee, represented the community on the Village of Freeville 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.

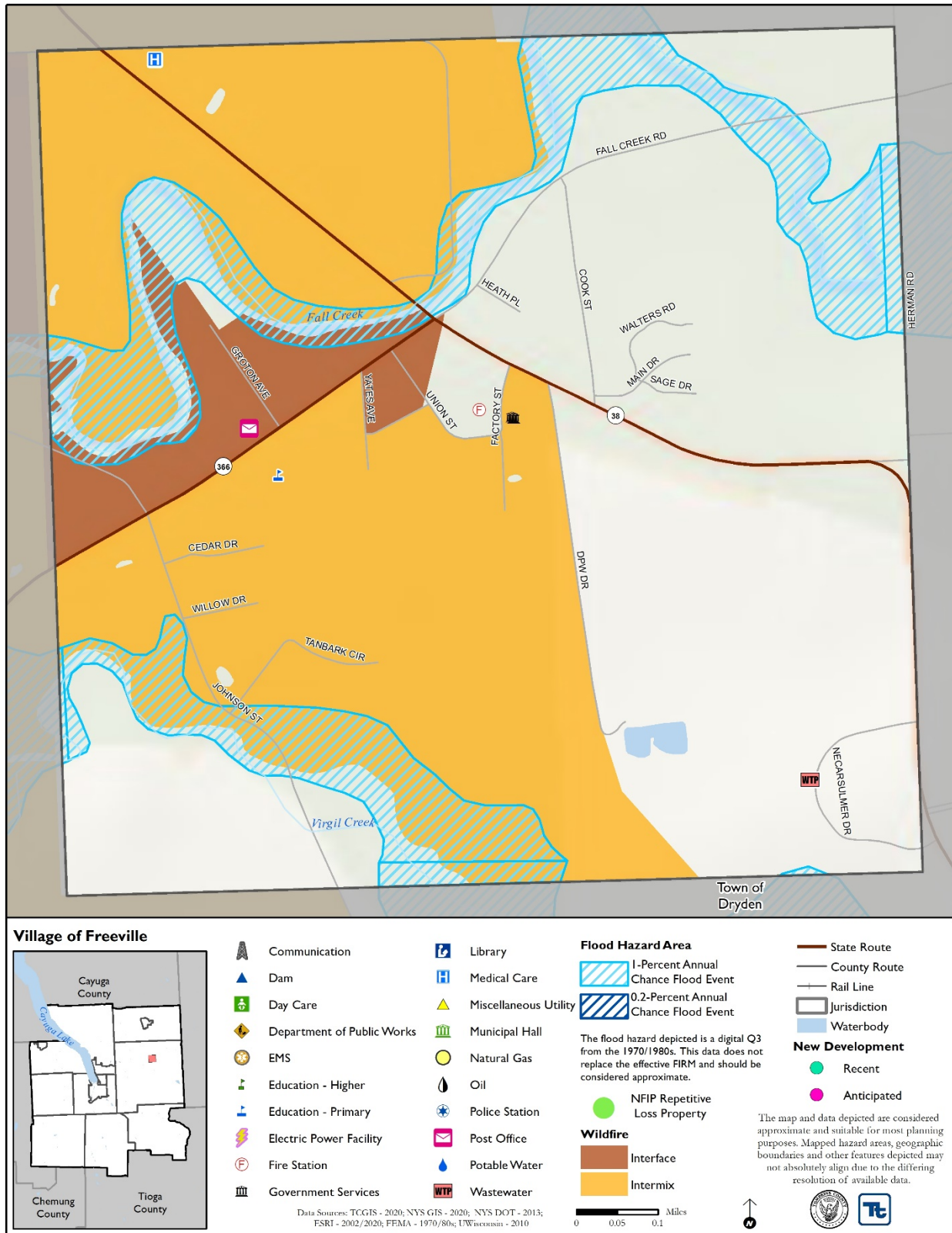
Additional documentation on the Village of Freeville’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.8.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Freeville that illustrates the probable areas impacted within the Village of Freeville. This map is based on the best available data at the time of the preparation of this plan, and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Freeville has significant exposure. The map is provided below.



Figure 9.8-1. Village of Freeville Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Backup Power for Sewer Facilities		
Project Number:	2021- V Freeville – 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm		
Description of the Problem:	The sewer plant and several important pump stations do not have any backup power. If power is lost trucks need to come in and manually pump stations. This takes valuable resources away from other services during this time.		
Action or Project Intended for Implementation			
Description of the Solution:	New generator hookup for sewer plant and 4 generators at the ready for the four main pump stations.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	NA	Estimated Benefits (losses avoided):	Uninterrupted sewer service.
Useful Life:	Unknown	Goals Met:	1
Estimated Cost:	20,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	1 Year	Potential Funding Sources:	BRIC; HMGP
Responsible Organization:	Village of Freeville DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Interrupted sewer service
	Portable Generator	\$5,000	Available to power aspects of plant for short time
	Permanent Generator	\$60,000	Much more consistent back up option
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Backup Power for Sewer Facilities	
Project Number:	2021- V Freeville – 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	This project protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This project is most cost effective
Technical	1	There are no technical difficulties identified
Political	1	There are no political complications
Legal	1	There are no legal complications
Fiscal	0	Costs have not fully been determined at this time
Environmental	1	This project has a positive environmental impact
Social	1	This project has a positive social impact
Administrative	1	This project has administrative support
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The timeline is feasible
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Living Snow Fence: Trees on Fall Creek Road		
Project Number:	2021- V Freeville – 002		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Winter Storm		
Description of the Problem:	Because of open fields on both sides of road snow blows and drifts on the roadway creating a hazard in the winter.		
Action or Project Intended for Implementation			
Description of the Solution:	Plant trees to block wind and help with blowing snow.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	Unknown	Estimated Benefits (losses avoided):	Avoid hazardous evacuation route
Useful Life:	50 Years	Goals Met:	1, 3
Estimated Cost:	25 trees at \$100 each	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	3 months planning and planting	Potential Funding Sources:	County stream corridor program; State Tree for Tribes funds
Responsible Organization:	Village of Freeville DPW	Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Install snow fencing	\$500	Non-permanent; eyesore
	Tree planting	\$2500	Low tech; multi-benefit
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Living Snow Fence: Trees on Fall Creek Road	
Project Number:	2021- V Freeville – 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This project is most cost effective
Technical	0	Additional technical assistance is needed
Political	1	There are no political complications
Legal	0	Legality has not been identified
Fiscal	0	Costs have not fully been determined at this time
Environmental	1	This project has a positive environmental impact
Social	1	This project has a positive social impact
Administrative	0	Administrative support has not been identified
Multi-Hazard	0	This does not address multiple hazards
Timeline	1	The timeline is feasible
Agency Champion	0	Agency champion has not been identified
Other Community Objectives	1	Yes
Total	8	
Priority (High/Med/Low)	Medium	



Action Worksheet			
Project Name:	Material Management Plan for Flood Prevention		
Project Number:	2021- V Freeville – 003		
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:	Trees and other items get hung up on RR trestles and cause ice dams and other water backup hazards. This lack of flow causes the creek to flood banks.		
Action or Project Intended for Implementation			
Description of the Solution:	Solution: The Village will conduct a field survey to document problem areas, source of problems, and solutions to mitigate frequent and damaging water back up and ice dams to identify the needs and key resources to develop a programmatic stream management program maintenance in order to reduce flood risk. This could Likely to include regular need for buying or renting procurement or lease of specialized equipment		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	Unknown	Estimated Benefits (losses avoided):	Reduced flood risk
Useful Life:	Unknown	Goals Met:	1,3
Estimated Cost:	60,000	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:	Village of Freeville DPW	Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Rent Backhoe	\$500 per day	Backhoe is not always available to rent when needed and it takes time and resources to get
	Develop plan for acquiring and share key materials need for periodic stream infrastructure maintenance including backhoe.	\$60,000	Develop long term maintenance plan and acquire key equipment.
Progress Report (for plan maintenance)			



Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	



Action Worksheet		
Project Name:	Material Management Plan for Flood Prevention	
Project Number:	2021- V Freeville – 003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	If it never prevents a flood then no, but if it save a property worth every cent
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Could be used for storm tree removal
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	



9.9 Town of Groton

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

9.9.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Groton’s hazard mitigation plan primary and alternate points of contact.

Table 9.9-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Donald F. Scheffler, Town Supervisor Address: 101 Conger Blvd., PO Box 36, Groton, NY 13073 Phone Number: 607-838-5102 Email: supervisor@grotontown.com	Name/Title: Dan Carey, Agricultural Advisory Committee Address: 101 Conger Blvd., PO Box 36, Groton, NY 13073 Phone Number: 607-591-1949 Email: dcacaeme@verison.net
NFIP Floodplain Administrator	
Name/Title: W. Rick Fritz, Town of Groton Code Enforcement Officer Address: 101 Conger Blvd., PO Box 36, Groton, NY 13073 Phone Number: 607-898-4428 Email: code@grotontown.com	

9.9.2 Municipal Profile

The Town of Groton is located in northeastern Tompkins County, and encompasses 50 square miles. The Village of Groton is located within the center of Town of Groton. The Town of Groton is located northeast of the City of Ithaca, bordering the Town of Dryden to the south, and the Town of Lansing to the west. Cayuga County, and Cortland County are to the north and east, respectively. New York State 38 intersects New York State Route 222 in the Village of Groton. The Town of Groton serves as a



part of the headwaters for Fall Creek, which serves as the water supply for Cornell University, in addition to headwaters for a portion of the Owasco Inlet.

Settlers arrived in Groton about 1797 from New England, likely borrowing the name from Groton Massachusetts, or Groton, Connecticut. Groton was created as a town in 1817 when the Town of Locke was divided. The southern part was named the Town of Division and became one of the six towns that comprised Tompkins County. About a year later, Division was renamed to the Town of Groton. The town is mainly rural, once home to significant manufacturing including the Groton Bridge Company and the Groton Carriage Company, the Monarch Road Roller Company, and several typewriter factories.

Groton is governed by an elected Town Supervisor and an elected four-person Town Council.

According to the 2014-2018 American Community Survey, the Town of Groton’s population is 3,685.

9.9.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.9-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.9-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	10	0	7	0	14	0	10	0	12	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	2	0	1	1	0	0	2	0	3	0
Total	12	0	8	1	14	0	12	0	15	0



Type of Development	2014	2015	2016	2017	2018
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 2015 to Present					
Mclean Fire District	Truck Bay Addition	1	2 Stevens road	Flood Plain	Fill added to raise out of BFE
AT&T/Verizon	Telecommunication Towers	1 at each address	962 Cortland Road 601 Sovocool Hill Road 822 Peruville Road	None	- complete - under construction - complete
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
-	-	-	-	-	-
-	-	-	-	-	-

SFHA Special Flood Hazard Area (1% flood event); * Only location-specific hazard zones or vulnerabilities identified.

9.9.4 Capability Assessment

The Town of Groton performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.9.4). The Town of Groton identified specific integration activities that will be incorporated



into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document reviews.

9.9.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.9-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<p>Comments: <i>NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i></p>					
Zoning Code	Yes	Town of Groton Land Use and Development Code 2011	Local	Building Code Dept and Zoning Board of Appeals	No
<p>Comment: <i>Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</i></p> <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	TOG Land Use Development Code 2011	Local	Code Official	No
<p>Comment: <i>Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</i></p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	-	Yes



Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department					
Post-Disaster Recovery Plan or Regulation	No	-	Local	-	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
Comment: 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. *The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.					
Growth Management Regulation	No	-	-	-	No
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Planning Board	No
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a) The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Planning Board	Yes
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019					
Flood Damage Prevention Law	Yes	Federal: Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA)	Local, State, Federal	Code Enforcement Officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Code Enforcement Officer	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of					



<i>the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</i>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No	-	-	-	Yes
Comment: <i>The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</i>					
Disaster Recovery Ordinance	No	-	Local	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	Local	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	-	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Planning Board	No
Comment: <i>Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level. *When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</i>					
Capital Improvement Plan	No				No
Comment: <i>A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.</i>					
Disaster Debris Management Plan	No				No
Comment: <i>Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</i>					
Floodplain or Watershed Plan	Yes	IO Plan for Cayuga Lake, 2018	Local	Town Representative	No
Comment: <i>The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</i>					
Stormwater Plan	No	-			No
Comment: <i>Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</i>					
Open Space Plan	No	NYS Constitution - Article 9; Statute of Local	Local	NA	Yes



		Governments. Section 10 (7)			
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	NA	No
Comment:					
Habitat Conservation Plan	No	-	Local	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	Yes	NYCRR Part 390 Agricultural and Farmland Protection - 2020	Local	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	-	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). This is available through County Emergency Response.					



***When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.**

Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA. This is available through County Emergency Response.					
Post-Disaster Recovery Plan	No	-	-	-	No
Comment:					
Continuity of Operations Plan	No	-	-	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations."					
Public Health Plan	No	-	-	-	No
Comment:					
Other: Emergency Response Plan	No	-	County Plan Available	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.9-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, Building Dept.
Permits are tracked by hazard area. For example, floodplain development permits.	Yes, Building Dept.
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No, buildout is slow due to lack of municipal held water or sewer within the Town.

9.9.4.2 Administrative and Technical Capability

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

Table 9.9-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Town Planning
Mitigation Planning Committee	NA	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-



Resources	Available? (Yes or No)	Department/ Agency/Position
Economic Development Commission/Committee	NA	-
Warning Systems / Services (reverse 911, outdoor warning signals)	NA	-
Maintenance programs to reduce risk	NA	-
Mutual aid agreements	Yes	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	No	No local planning department
Engineers or professionals trained in building or infrastructure construction practices	Yes	-
Planners or engineers with an understanding of natural hazards	No	Support through County Planning / Soil and Water Cons. Dist.
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	Deputy Clerk has GIS experience
Scientist familiar with natural hazards	No	-But do utilize Cornell Cooperative Extension for support
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Officer
Surveyor(s)	No	Town Board Member
Emergency Manager	No	-
Grant writer(s)	Yes	Town Clerk
Resilience Officer	No	-
Other	No	-

9.9.4.3 Fiscal Capability

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

Table 9.9-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	NA
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	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	NA
Withhold public expenditures in hazard-prone areas	NA
Other federal or state Funding Programs	NA
Open Space Acquisition funding programs	NA
Other	NA

9.9.4.4 Education and Outreach Capability

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



Table 9.9-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	

9.9.4.5 Community Classifications

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

Table 9.9-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No		-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4 for one to two family and 4 for other	2017
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4 for one to two family and 4 for other	2017
NYSDEC Climate Smart Community	No	Participating	2019
Storm Ready Certification	No		-
Firewise Communities classification	No		-
Other	-	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.9.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.



The Town of Groton does not have access to resources to determine the possible impacts of climate change upon the Town. However, the administration is supportive of integrating climate change in policies or actions including further integrate changes from building codes into other local laws and policies. Climate change is already being integrated into current policies/plans or actions (projects/monitoring) within the Town of Groton through training and technological improvements to address flooding with the Highway Department.

Table 9.9-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	High
Severe Storm	Medium
Severe Winter Storm	Medium
Wildfire	Medium

**High Capacity exists and is in use*
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.9.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

The Town of Groton Code Enforcement Officer is the designated NFIP administrator for the Town of Groton.

Table 9.9-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	The areas prone to flooding are not documented to an official capacity within the township
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No, we have the map corrections that owners have requested from FEMA.



NFIP Topic	Comments
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Building Inspector makes determination, no damages were determined within the jurisdiction.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	None so far.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	No, they are outdated.
Resources	
What local department is responsible for floodplain management?	Building department, zoning, and planning
Are any certified floodplain managers on staff in your jurisdiction?	Yes
Do you have access to resources to determine possible future flooding conditions from climate change?	No, the town needs resources to determine flood behavior due to climate change
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes, any assistance that can be provided.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Permit applications requested floodplain info but is reviewed based on GIS site provided by Tompkins County
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Based on determination by planning board
What are the barriers to running an effective NFIP program in the community, if any?	Financial
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	NA
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	9/11/1990
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	The flood damage protections law is part of the 2011 Land use and Development Code
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Yes



NFIP Topic	Comments
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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	Not participating but would be interested in program for part of the municipality.

9.9.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.9-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Groton	8	6	\$16,773.65	0	-

Source: FEMA 2020
 Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.
 RL = Repetitive Loss; SR = Severe Repetitive Loss

9.9.4.9 Additional Areas of Existing Integration

In terms of emergency response planning the Town of Groton actively contracts with the Village of Groton Fire Department for municipal emergencies. In addition, the McLean Fire District provides active fire services to town residents within the McLean Fire District. In terms of regulation, mitigation has been integrated into several aspects of municipal code. These include the Town’s creation of a Flood Hazard Combining District to provide sensible controls over flood hazard areas and subdivision sketch plans require identification of wide range of natural features that could impact development. In terms of planning, updates to the Town’s Comprehensive Plan will integrate key findings of hazard mitigation plan into relevant sections.

9.9.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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



Evacuation Routes

The Town does not actively maintain or have designated evacuation routes in the town. However, the following roads are the main arterials that would likely be used in an event of a natural disaster.

- Main Street
- Sovocool Hill Road
- Salt Road
- State Rt. 222
- Spring Street Extension (County)

The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The Town has identified the following location as a potential shelter. However, In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.9-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Groton Elementary School	516 Elm St, Groton, NY 13073	500	Yes	No	Yes	None	None

Temporary Housing

The Town of Groton does not have any available land to place temporary trailers. In order to identify sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.



Table 9.9-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
The Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point and may consider church parking facilities.					

Permanent Housing

The Town of Groton does not have any land for permanent housing. However, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations in neighboring communities.

Table 9.9-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
The Town may refer to the countywide buildable land analysis was conducted and presented in Section 4 (County Profile).					

9.9.5 Hazard Event History Specific to the Town of Groton

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Groton’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Town of Groton. Table 9.9-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.



Table 9.9-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
7/2/2014	Thunderstorm Wind	No	A stalled frontal boundary resulted in moist and unstable air present over central New York. An approaching upper level system provided the forcing needed to generate severe thunderstorms across central New York. Organized shear and lift resulted in large hail along with severe wind reports. Numerous trees were blown down in the village.	None
6/10/2015	Thunderstorm Wind	No	A severe thunderstorm moved across the area and produced severe winds. The thunderstorm resulted in trees falling over across the area.	None
7/9/2015	Flash Flood	Yes	Water was flooding roads from Trumansburg to Groton, including severe flooding along Pease Road.	None
8/22/2017	Thunderstorm Wind	No	A thunderstorm moved across the region and became severe. This thunderstorm produced severe winds and knocked over trees and wires.	None
8/8/2019	Thunderstorm Wind	No	A cold front and moved through Central New York during the afternoon of the 8th. This sparked a line of severe thunderstorms across the area, mainly ahead of the front.	None

Notes:

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

9.9.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Groton’s risk assessment results and data used to determine the hazard ranking.

9.9.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.9-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
MCLEAN FIRE DEPARTMENT	Fire Station	Yes	Yes	2021 T GROTON - 005
US POST OFFICE MCLEAN	Post Office	Yes	Yes	2021 T GROTON - 005

Source: GIS 2020

9.9.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each municipality 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 Groton. The Town of Groton has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Groton indicated the following:

- Direct effects of Wildfire are minimal and therefore should be adjusted to a low relative risk ranking.

Table 9.9-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	High



Hazard	Ranking
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Low*

Note: The scale is based on the following hazard rankings as established in Section 5.3.
 *The Town of Groton changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Village of Freeville

9.9.6.3 Identified Issues

The Town of Groton has identified the following vulnerabilities within their community:

- The Town of Groton does not have the capacity to increase adaptive capabilities due to financial limitations.
- The Town needs resources to increase emergency response.

Specific areas of concern based on resident response to the Town of Groton Hazard Mitigation Citizen survey include:

- None identified.

9.9.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.9.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.9-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2020HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
TG1		Water Contamination, Flash Flood, Severe Storm	Town of Groton	Develop Watershed Assessment for Owasco Inlet to assess priority flood hazard and stream corridor improvements	Complete but does not contain location-specific recommendations	High	Medium	No further action to be taken
						Unsure		



9.9.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

While the Town of Groton has not identified any specific mitigation projects implemented since the last plan, it has addressed ongoing maintenance projects to minimize the potential for localized flood events. Proposed Hazard Mitigation Initiatives for the Plan Update

9.9.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Groton participated in a mitigation action workshop in October 2020 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).

summarizes the comprehensive range of specific mitigation initiatives the Town of Groton would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.9-19. 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
2021 T GROTON - 001	Replace Large Capacity Culvert – Clerk St	1,2	Flood	<p>Problem: High water volume from a heavy rain or snow shed event could destroy the road. Particular road is a steep bend making one end invisible to potential hazard.</p> <p>Solution: Update and rightsized culvert pipe to 48 inches.</p>	No	No	1 month	Town DPW	Medium	High	Municipal Budget with assistance from HMA BRIC.	High	SIP	SP
2021 T GROTON - 002	Emergency Shelter Development	All	All	<p>Problem: Insufficient evacuation shelters</p> <p>Solution: Partner with Groton School District, Groton fire dept., McLean Fire District, Tompkins County EMS, Red Cross and Local houses of worship to ensure that necessary utilities and backup power are provided for community's critical facilities and that as appropriate those critical facilities that serve as shelters are adequately organized.</p>	Yes	No	6 months	Town DPW	Low	High	Municipal Budget with assistance from FEMA HMGP	High	SIP	ES
2021 T GROTON - 003	Village of Groton Public Safety Building	All	All	<p>Problem: Current fire, ambulance and police safety building is dilapidated and too small for typical fire apparatus. The village fire and ambulance serve both the Village municipality as well as contracting with the Town of Groton</p> <p>Action or Project Intended for Implementation</p> <p>The Town of Groton is in support of this upgrade as it would maintain our current contracts and allow the departments to make apparatus</p>	Yes	No	1 year	Town and village Fire Dept.	Low	High	Municipal Budget with assistance from FEMA HMA and Assistance to Firefighters Grant Program	High	SIP	ES



Table 9.9-19. 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
				<p>purchases without being penalized for an abnormal size.</p> <p>Solution: Upgrade municipal services and public safety building and ensure that it is located and designed in a way so as to reduce risk to hazards, in particular regional flood risk.</p>										
2021 T GROTON - 004	Salt Storage Improvements	1,4	Severe Winter storm	<p>Problem: Current road salt containment area is uncovered and deteriorating. Salt is exposed to the elements which progresses deterioration and causes run off concerns. The potential loss of supply adds to expenses as it requires continual load deliveries.</p> <p>Solution: Protection of road salt supply by constructing a building capable of supporting indoor large equipment and contain run off. Protected storage would also potentially stretch the supply over longer periods adding a buffer to fluctuating prices.</p>	Yes	No	1 year	Town DPW	Medium	High	Municipal Budget with assistance From NYSERDA CSC Grant Program	High	SIP	SP
2021 T GROTON - 005	Flood Prevention Outreach	All	Flood	<p>Problem: There are critical facilities located in the town 100-year flood zone.</p> <p>Solution: Conduct outreach to each of these facilities to determine best way to reduce vulnerability to flooding. If retrofitting is the best option, provide potential solutions to reduce damage from flooding. If acquisition and relocation is necessary, work with individual</p>	Yes	No	2 years	Town Board	High	High	Municipal Budget	High	SIP	SP



Table 9.9-19. 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
				entity to acquire and relocate out of the flood zone										

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
 PDM Pre-Disaster 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*



Table 9.9-20. 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	Total	High / Medium / Low
2021 T GROTON - 001	Replace Large Capacity Culvert – Clerk St	1	1	1	1	1	1	0	1	0	1	1	1	1	0	11	High
2021 T GROTON - 002	Emergency Shelter Development	1	1	1	1	1	0	0	1	0	1	1	1	1	0	10	High
2021 T GROTON - 003	Village of Groton Public Safety Building	1	0	1	1	1	0	0	1	0	1	1	1	1	1	10	High
2021 T GROTON - 004	Salt Storage Improvements	1	0	0	1	1	1	0	1	-1	1	1	1	1	1	9	High
2021 T GROTON - 005	Flood Prevention Outreach	1	1	1	1	1	0	-1	1	1	1	1	1	1	1	11	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.9.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.9-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak		002;003								002;003
Drought		002;003								002;003
Extreme Temperature		002;003								002;003
Flood		001; 002;003; 005							001; 005	002;003
Harmful Algal Bloom		002;003								002;003
Invasive Species		002;003								002;003
Severe Storm		002;003								002;003
Severe Winter Storm		002;003; 004							004	002;003
Wildfire		002;003								002;003

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.9.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Groton followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Supervisor, Code Enforcement, and Clerk. The Supervisor represented the community on the Town of Groton 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.

Additional documentation on the Town of Groton’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

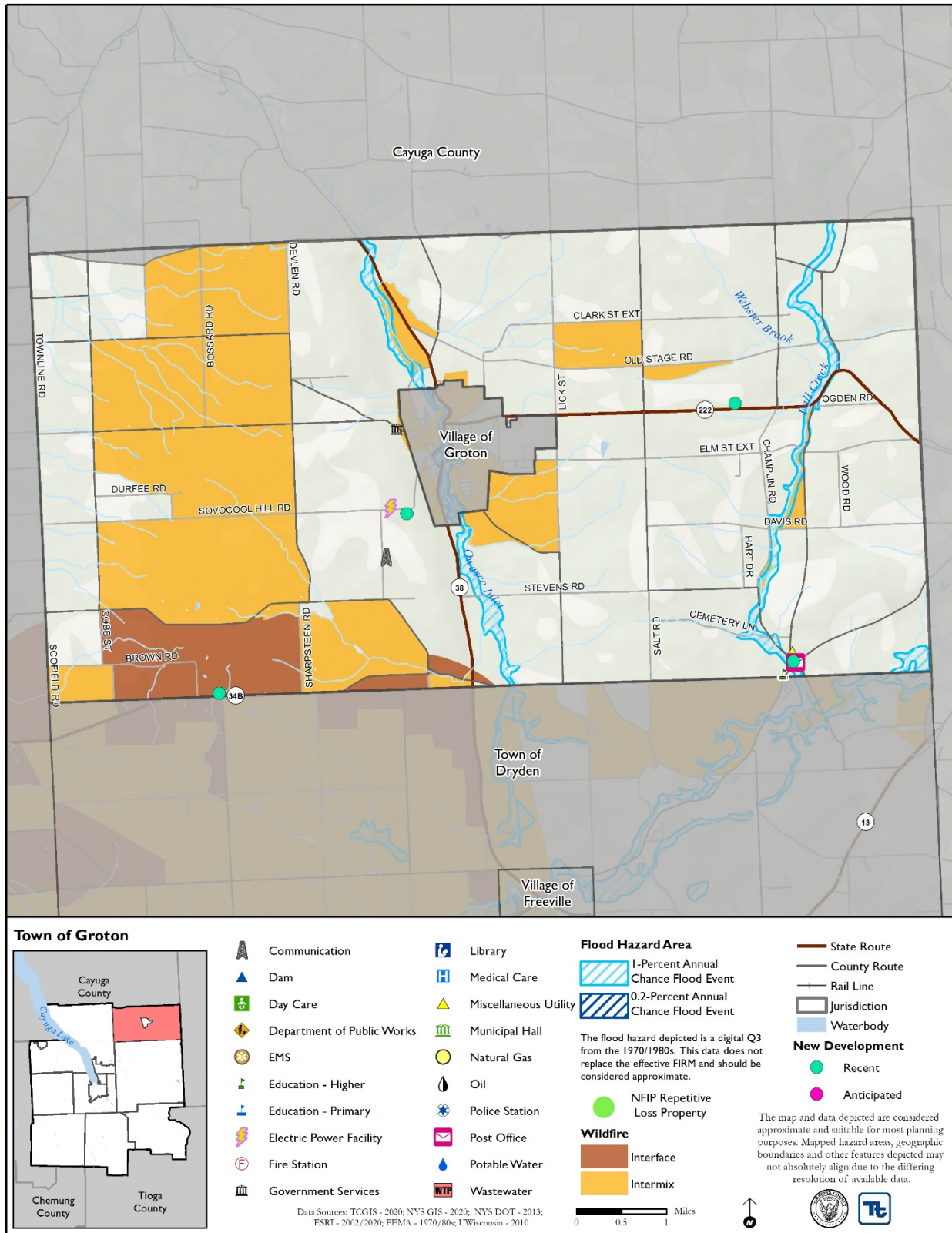


9.9.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Groton that illustrates the probable areas impacted within the Town of Groton. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Groton has significant exposure. The map is provided below.



Figure 9.9-1. Town of Groton Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Replace Large Capacity Culvert – Clerk St		
Project Number:	2021 T GROTON - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	High water volume from a heavy rain or snow shed event could destroy the road. Particular road is a steer bend making one end invisible to potential hazard.		
Action or Project Intended for Implementation			
Description of the Solution:	Replace and rightsize pipe with new box		
Is this project related to a Critical Facility?		Yes	No X
Is the critical facility located in the 1% annual chance flood area?		Yes	No X
(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:	500-year flood	Estimated Benefits (losses avoided):	Reduce flooding and road hazards
Useful Life:	30 years	Goals Met:	1,2,
Estimated Cost:	70k	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	1 month	Potential Funding Sources:	Town of Groton
Responsible Organization:	Town of Groton Highway	Local Planning Mechanisms to be Used in Implementation if any:	Municipal Budget with assistance from HMA BRIC.
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$)	Current problem continues
	Shut off road access	100USD	Increase EMS travel time which increases risk to residents
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Replace Large Capacity Culvert – Clerk St	
Project Number:	2021 T GROTON - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Will need to be added to budget, not yet implemented
Environmental	1	Will work with all emissary agencies to ensure impacts are prevented or mitigated
Social	0	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	11	
Priority (High/Med/Low)		



Action Worksheet			
Project Name:	Emergency Shelter Development		
Project Number:	2021 T GROTON - 002		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Insufficient evacuation shelters.		
Action or Project Intended for Implementation			
Description of the Solution:	Partner with Groton School District, Groton fire dept., McLean Fire District, Tompkins County EMS, Red Cross and Local houses of worship to ensure that necessary utilities and backup power are provided for community's critical facilities and that as appropriate those critical facilities that serve as shelters are adequately organized.		
Is this project related to a Critical Facility?	Yes	X	No
Is the critical facility located in the 1% annual chance flood area?	Yes	No	NA
(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:	500-year flood	Estimated Benefits (losses avoided):	Reduce vulnerability to risk
Useful Life:	20 years	Goals Met:	All
Estimated Cost:	100k	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Town of Groton
Responsible Organization:	Town	Local Planning Mechanisms to be Used in Implementation if any:	Municipal Budget with assistance from HMA HMGP.
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$)	Current problem continues
	Study needs in all areas and types of emergency	50k	Assess where shelters are needed and how big - not sufficient information
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Emergency Shelter Development	
Project Number:	2021 T GROTON - 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	Would require the outside permission of volunteer agencies and organizations to be willing to implement
Fiscal	0	Will need to be added to budget, not yet implemented
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)		



Action Worksheet			
Project Name:	Village of Groton Public Safety Building		
Project Number:	2021 T GROTON - 003		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Current fire, ambulance and police safety building is dilapidated and too small for typical fire apparatus. The village fire and ambulance serve both the Village municipality as well as contracting with the Town of Groton		
Action or Project Intended for Implementation			
Description of the Solution:	Upgrade municipal services and public safety building and ensure that it is located and designed in a way so as to reduce risk to hazards, in particular regional flood risk.		
Is this project related to a Critical Facility?		Yes X	No
Is the critical facility located in the 1% annual chance flood area?		Yes	No NA
(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:	500-year flood	Estimated Benefits (losses avoided):	Reduce vulnerability to risk
Useful Life:	50 years	Goals Met:	All
Estimated Cost:	Low	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Town of Groton
Responsible Organization:	Town	Local Planning Mechanisms to be Used in Implementation if any:	Municipal Budget with assistance from FEMA HMA and Assistance to Firefighters Grant Program
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$)	Current problem continues
	Develop the town emergency services	High	The project is expensive
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Emergency Shelter Development	
Project Number:	2021 T GROTON - 003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides Ambulance and Fire Service to Town of Groton
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	1	Town of Groton contracts with the Village for Fire Services, would pay more to contract with outside sources for services.
Legal	0	
Fiscal	0	Town of Groton contracts with the Village for Fire Services
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	Unknown timeline
Other Community Objectives	1	Supports all areas of local community including outside agencies under municipal aide functions.
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Salt Storage Improvements		
Project Number:	2021 T GROTON - 004		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Winter Storms		
Description of the Problem:	Current road salt containment area is uncovered and deteriorating. Salt is exposed to the elements which progresses deterioration and causes run off concerns. The potential loss of supply adds to expenses as it requires continual load deliveries.		
Action or Project Intended for Implementation			
Description of the Solution:	Protection of road salt supply by constructing a building capable of supporting indoor large equipment and contain run off. Protected storage would also potentially stretch the supply over longer periods adding a buffer to fluctuating prices.		
Is this project related to a Critical Facility?		Yes X	No
Is the critical facility located in the 1% annual chance flood area?		Yes	No NA
(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:	500-year flood	Estimated Benefits (losses avoided):	Higher response to severe winter storm
Useful Life:	30 years	Goals Met:	1,4
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	6 months	Potential Funding Sources:	Town of Groton
Responsible Organization:	Town	Local Planning Mechanisms to be Used in Implementation if any:	Municipal Budget with assistance From NYSERDA CSC Grant Program
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$0	Current problem continues
	Shared services	Low	Limited capacity
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Salt Storage Improvements	
Project Number:	2021 T GROTON - 004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Road salt prepares roadways for safe travel during ice or snowy conditions. Allowing general travel or emergency vehicles.
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	Department has construction capabilities
Political	1	Town Board has looked into quotes and some money is budgeted
Legal	1	
Fiscal	0	A small amount has been budgeted. Constant State threat to remove all local funding which this funding has gone down in previous years leaving it up to local taxpayers.
Environmental	1	Would protect against water contamination of local watershed
Social	-1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	Supports all areas of local community and travelers through our district during the 6 months of potential winter weather and unpredictable lake effect snows
Total	9	
Priority (High/Med/Low)	High	



9.10 Village of Groton

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

9.10.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Groton’s hazard mitigation plan primary and alternate points of contact.

Table 9.10-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Nancy Niswender Address: 143 E Cortland St. Groton, NY 13073 Phone Number: 607-898-3966 – cell 315-224-3363 Email: clerk@grotonny.org	Name/Title: Chad Shurtleff Address: 143 E Cortland St, Groton, NY 13073 Phone Number: 607-898-3966 – cell 607-227-9507 Email: chaddpw@gmail.com
NFIP Floodplain Administrator	
Name/Title: Michael Anderson Address: 143 E Cortland St. Groton, NY 13073 Phone Number: 607-898-3966 – cell 607-745-3178 Email: codeofficer@grotonny.org	

9.10.2 Municipal Profile

The Village of Groton is centrally located within the Town of Groton in northeast Tompkins County. The population as of the 2010 census was 2363.

The Village was incorporated in 1860, and has a history of industrial innovation and manufacturing, selling products locally, nationally, and internationally. Today, industrial manufacturing includes circuit board assembly and repair, and a company that makes award-winning sheep milk cheeses and yogurt. The Village is home to one of 47 municipal electric systems in New York State.

The Village of Groton is governed by an elected Mayor and an elected four-person Board of Trustees.



According to the 2014-2018 American Community Survey, the Village of Groton population is 2,287.

9.10.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.10-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.10-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.10-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)										
Single Family	98	0	94	0	93	0	101	0	68	0
Multi-Family	4	0	11	0	2	0	5	0	8	0
Other (commercial, mixed-use, etc.)	2	0	0	0	2	0	3	0	0	0
Total	104	0	105	0	97	0	109	0	76	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 2014 to Present										
Old Chatham Creamery factory expansion	Addition to existing 17,000 sq ft		12,000 sq ft		210 Gerald Moses Dr.		none		complete	
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
New Municipal Building	New Building				308 Main St.		None		Planning stage	

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.10.4 Capability Assessment

The Village of Groton performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability



Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.1.4). The Village of Groton identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.10.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.10-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017). Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.					
Zoning Code	Yes	Adopted 1974, updated 2015	Local	Local Zoning Board of Adjustment	No
Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan" ¹¹ or "in accordance with a comprehensive plan." ¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level</p> <ul style="list-style-type: none"> Chapter 200, Zoning 1974. The intended purpose of this chapter is to promote and protect the public health, safety and general welfare of the community; to reduce congestion on the streets and highways; to prevent the overcrowding of land and to avoid excessive concentrations of population; to facilitate the adequate provisions of transportation, water, sewage disposal, schools, parks and other public requirements; to protect the established character and the social and economic value of property; and to establish zones wherein regulations concerning the use of land and structures, the density of development, the amount of open space that must be maintained, will be set forth to guide and regulate the most appropriate and orderly development and growth of the Village in accordance with a comprehensive development plan. By authority of the Chapter the Planning Board is hereby empowered to grant site plan approval in accordance with the provisions of § 7-725-a of the Village Law. No building, structure or other improvement on land hereafter erected, changed, altered or extended shall be used or occupied and no change in the use of land after the effective date of this chapter unless a certificate of occupancy shall have been issued by the Code Enforcement Officer. It shall be unlawful for any person, firm, or corporation to establish, maintain, operate, or conduct within the Village of Groton, commercial storage facilities within the one-hundred- and five-hundred-year floodplain, or on Department of Environmental Conservation wetlands. <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	1970 – Chapter 177, Subdivision of Land	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <ul style="list-style-type: none"> Chapter 177, Subdivision of Land. It is declared to be the policy of the Planning Board to consider land subdivision plats as part of a plan for the orderly, efficient, and economical development of the village. (1) Land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood, or other menace. (2) Proper provision shall be made for drainage, water supply, sewerage, and other needed improvements. Land subject to flooding or land deemed by the Planning Board to be uninhabitable shall not be platted for residential occupancy nor for such other uses as may increase danger to health, life or property or aggravate the flood hazard, but such land within the plat shall be set aside for such uses as shall not be endangered by periodic or occasional inundation or improved in a manner satisfactory to the Planning Board to remedy said hazardous conditions. The Planning Board shall, wherever possible, establish the preservation of all-natural features which add value to residential developments and to the community, such as large trees or groves, watercourses and waterfalls, beaches, historic spots, vistas and similar irreplaceable assets. <p>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local		Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<i>less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</i>					
Post-Disaster Recovery Plan or Regulation	No				No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: <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.</i></p> <p>*The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.</p>					
Growth Management Regulation	No				No
<p>Comment: <i>In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</i></p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
<p>Comment: <i>The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</i></p> <p>*When the Village updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	?	Yes
<p>Comment: <i>New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</i></p>					
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRRA) Chapter 109, 1987	Local	Village Board – Code Enforcement Officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: <i>A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</i></p> <ul style="list-style-type: none"> Chapter 109, Flood Damage Prevention. <i>The Board of Trustees of the Village of Groton finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Village of Groton and that such damages may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. This chapter shall apply to all areas of special flood hazard within the jurisdiction of the Village of Groton.</i> 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<ul style="list-style-type: none"> It is the purpose of this chapter to; <ul style="list-style-type: none"> 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 for and maintain participation in the National Flood Insurance Program. The Code Enforcement Officer is hereby appointed the local administrator to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. A development permit shall be obtained before the start of construction or any other development within the area of special flood hazard as established in § 109-6. All subdivision proposals shall be consistent with the need to minimize flood damage; have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed to minimize flood damage; have adequate drainage provided to reduce exposure to flood damage; and be provided for subdivision proposals and other proposed developments, including proposals for manufactured home parks and subdivisions, greater than either 50 lots or five acres. New construction and substantial improvements of any residential structure shall have the lowest floor, including the basement or cellar, elevated to or above the base flood elevation. New construction and substantial improvements of any commercial, industrial or other nonresidential structure, together with attendant utility and sanitary facilities, shall either have the lowest floor, including the basement or cellar, elevated to or above the base flood elevation or be floodproofed so that the structure is watertight below the base flood level. When floodway data is available for a particular site as provided by §§ 109-6 and 109-12B, all encroachments, including fill, new construction, substantial improvements and other development, are prohibited within the limits of the floodway unless a technical evaluation demonstrates that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. <p>*The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	No	EPA Phase II Stormwater Rule	Federal	?	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	Yes	NYS Executive Law, Article 75	Local		Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment:					
Other Applicable Codes, Ordinances, & Requirements	Yes	-	-	-	-
Comment: Property Maintenance Law – Chapter 153, 1988, amendment 2011 Fire Prevention and Building Code Chapter 101, 2007, amendment 2014 Unsafe buildings and unsafe land law: Chapter 71-3, 1977					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a), 2005 – Joint Comprehensive Plan 2005	Local	Planning Board	No
<p>Comment: <i>Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level</i></p> <ul style="list-style-type: none"> <i>Joint Comprehensive Plan 2005. The Goals of the Plan are to; Ensure the provision of a comprehensive system of fire, police and emergency services to protect life and property throughout the community; Protect the diverse physical environment; Update and improve local emergency response plans; Work with county and local emergency management services to identify gaps and remedy gaps in emergency services; and Work cooperatively with State, County and local public agencies to ensure an effective program of public education and awareness of hazards to life and property, and appropriate action in case of public emergency.</i> <i>These Goals and Objectives of the Plan will be implemented by taking actions to; Adopt clear and concise policies and regulations to better protect the significant open space resources of the community; Adopt policies and regulations to better protect stream corridors, wetlands, and other water bodies from inappropriate development; Promote carefully designed development that minimizes adverse impacts such as loss of agricultural and forest lands, soil erosion and sedimentation, and stormwater runoff; and Protect both private property and the functional capabilities of floodplains by channeling development away from such areas.</i> <p>*When the Village updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	-	No
Comment: <i>A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.</i>					
Disaster Debris Management Plan	No	-	Local	-	No
Comment: <i>Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</i>					
Floodplain or Watershed Plan	Yes	Owasco Lake Watershed Management Council, inc.	Local	Village Clerk	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	No		Local	-	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)			Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	No	-	-	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	-	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	No	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	None				
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	-	Local	Local	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations."					
Public Health Plan	No	-	Local	-	No
Comment:					
Other: Emergency Response Plan	Yes	-	Local	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS. Electric Substation Spill Plan – April 1992 Water Emergency Response Plan – Jan 2010					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.10-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No



Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.10.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Groton.

Table 9.10-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Whistle
Maintenance programs to reduce risk	No	
Mutual aid agreements	Yes	Emergency Management/ Fire Dept/ DPW
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	CT Male
Engineers or professionals trained in building or infrastructure construction practices	Yes	CT Male
Planners or engineers with an understanding of natural hazards	Yes	CT Male
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	-
Scientist familiar with natural hazards	Yes	CT Male
NFIP Floodplain Administrator (FPA)	Yes	Code Officer
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	Thoma Development Consultants
Resilience Officer	No	-
Other	No	-

9.10.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Groton.



Table 9.10-6. 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	No
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	No
Open Space Acquisition funding programs	No
Other	No

9.10.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Groton.

Table 9.10-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes – clerk
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes, Website/Social Media
Warning systems for hazard events; if yes, briefly describe.	Yes 911 Swift
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No – have safety plan for covid
Other	No

9.10.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Groton.

Table 9.10-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	no	-	-



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Level 4	2020
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Level 4	2020
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other		-	-

Note:

N/A Not applicable
NP Not participating
- Unavailable

9.10.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.10-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High Capacity exists and is in use
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.10.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.



NFIP Floodplain Administrator (FPA)

Name/Title: Michael Anderson
Address: 143 E Cortland St. Groton, NY 13073
Phone Number: 607-898-3966 – cell 607-745-3178
Email: codeofficer@grotonny.org

Table 9.10-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	Almost no properties are located in a floodplain within the Village
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Inspection of property – none in recent years
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	1 – Dollar Store
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Outdated and is hard to read
Resources	
What local department is responsible for floodplain management?	Code Enforcement
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"> If so, what type of assistance/training is needed? 	Yes
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Permit review and inspections



NFIP Topic	Comments
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Financial indicators (dollar cost) and square footage
What are the barriers to running an effective NFIP program in the community, if any?	None
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	02/15/2012
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	Chapter 109, Adopted 1987, adopted code in 1990
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Yes
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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No – Open to the idea

9.10.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Groton.

Table 9.10-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Village of Groton	6	14	\$620,880.83	0

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.



RL = Repetitive Loss; SRL = Severe Repetitive Loss

9.10.4.9 Additional Areas of Existing Integration

- The municipality prohibits construction of structures within the 100-year floodplain.
- The municipality continues to support retrofitting or relocation of structures located within hazard-prone areas to protect from future damages.
- The municipality maintains compliance and good standing with the NFIP.
- The municipality works to maintain high regulatory standards to manage flood risk in accordance with NYS freeboard requirements.
- The municipality maintains mutual aid agreements with neighboring communities.
- The municipality implements best farming and agriculture practices to minimize erosion and other environmental impacts from agriculture land use.
- The municipality maintains well and infrastructure elevations to meet current code requirements
- The municipality has a program to remove dangerous trees and promote planting healthy trees, and street tree programs as part of the Community Forest Management Plan
- The municipality works along with County and regional agencies to conduct damage assessments, and with entities that support FEMA/SEMO paperwork after disasters.
- The municipality supports county efforts to assess facilities for earthquake vulnerabilities and with the development of an earthquake management plan.
- The municipality continues to develop, enhance, and implement existing emergency plans.
- The municipality supports all county-wide and municipal initiatives identified in the HMP.

9.10.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The following are considered evacuation routes



- Route 222
- Elm Street

However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Village will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The following are a list of shelters within the Village. In the event that sheltering is needed, shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.10-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Groton Elementary School	516 Main Street	280	Yes	Yes	Yes	Local EMS	“Post-Impact” 140 capacity
Groton Jr/Sr High School	400 Peru Rd	720	Yes	Yes	Some	Local EMS	“Post-Impact” 350 capacity

Temporary Housing

The Village has identified site for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event additional temporary housing is needed, the Village will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.10-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Gerald Moses Dr	Gerald Moses Dr	Would need Temp Set up	TBD	Vacant 5-acre Lot	None



Permanent Housing

The Village has not been able to identify suitable permanent housing locations at this time. However, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Village can utilize this analysis to identify potential locations as needed.

Table 9.10-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Please refer to the County-wide buildable land inventory in Volume 1, Section 4 (County Profile) of this plan.					

9.10.5 Hazard Event History Specific to the Village of Groton

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Groton’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.10-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.10-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Although the Village was impacted, Village of Groton did not report any damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools, and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Although the Village was impacted, Village of Groton did not report any damages.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Ad'l Hours for snow removal (reimbursed)
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Although the Village was impacted, Village of Groton did not report any damages.
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	No damage reported for the village	NA

Notes:

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

9.10.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Village of Groton’s risk assessment results and data used to determine the hazard ranking.



9.10.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.10-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
GROTON FAMILY PRACTICE	Medical Office	Yes	Yes	2021-V. Groton-005
GROTON COMMUNITY CARE	Medical Office	Yes	Yes	2021-V. Groton-005
GROTON COMMUNITY HEALTH CARE	Medical Office	Yes	Ys	2021-V. Groton-005

Source: 2020 GIS

9.10.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins as a whole. Therefore, each Village of Groton 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 Groton. The Village



of Groton has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Groton confirmed the results noted below.

Table 9.10-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.10.6.3 Identified Issues

The Village of Groton has identified the following vulnerabilities within their community:

- The Village does not have a designated shelter outside of a flood zone.
- Flooding is a significant concern for the village.

Specific areas of concern based on resident response to the Village of Groton Hazard Mitigation Citizen survey include:

- No major issues identified.

9.10.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.10.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.10-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
VG1	-	Water Contamination, Flash Floods, Severe Storm	Village of Groton	Develop Watershed Assessment for Owasco Inlet to assess priority flood hazard and stream corridor improvements	Complete but does not contain location-specific recommendations	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
VG2	-	Flash Flood	Village of Groton	Prohibit development within the stream corridor of Owasco Inlet and actively work to increase the resilience of structures that exist within these areas		Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
VG3	-	Flooding	Village	W South Street stormwater improvement project by installing pipes; 2016	Completed 2018	Cost	Medium	Complete
						Level of Protection	High	
						Damages Avoided; Evidence of Success	High	



9.10.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Groton has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- None identified.

9.10.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Groton participated in a mitigation action workshop in 2020 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).

Table 9.10-19 summarizes the comprehensive range of specific mitigation initiatives the Village of Groton would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.10-19. Proposed Hazard Mitigation Initiatives

Project	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	Number Priority	Mitigation Category	CRS Category
2021-V Groton-001	Flood Assessment	1,5	Flood	<p>Problem: The Owasco Inlet runs through the village of Groton and is the primary area of concern for the village and town in regard to flooding. Properties along this creek experience potential risk to flash flooding</p> <p>Solution: Conduct an assessment to better understand the threats to the existing properties along the creek and apply for pre-disaster mitigation funding to acquire and relocate repetitive flooding facilities/ properties identified in the assessment. The Town of Groton has agreed to assist with equipment and manpower in the final project.</p>	No	No	2 years	Village Board	Medium	High	HMGP, HMA, Emergency Watershed Protection (EWP) program	High	SIP	SP
2021-V Groton-002	Clay tile replacement	1,3,5	Flood	<p>Problem: 90+ yr. old 4" & 6" clay tile on Spring St continues to cause flooding and</p>	No	No	1 year	Village DPW	Low	High	HMGP, FMA, Municipal Budget	High	SIP	SP



Table 9.10-19. Proposed Hazard Mitigation Initiatives

Project	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	Number Priority	Mitigation Category	CRS Category
				<p>damage to surrounding land and property.</p> <p>Solution: Analyze existing stormwater drainage system and identify actions recommended for reducing flood damage potential.</p>										
2021-V Groton-003	William Street Debris Management	1,4	Severe Storm, Flood	<p>Problem: William Street Stream Crossing – Heavy Rains bring excess debris which causes blockage and thus flooding.</p> <p>Solution: Develop a retention basin for flood control measures and debris screen which will need to be installed to prevent future erosion and corrosion. For specifics, the town would need preliminary funding for engineering and design, prior to receiving funding for the actual project.</p>	No	No	2 years	Village DPW	Low	High	HMGP, BRIC, HMA, Municipal Budget	High	SIP	SP



Table 9.10-19. Proposed Hazard Mitigation Initiatives

Project	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	Number Priority	Mitigation Category	CRS Category
2021-V Groton-004	New Municipal Safety Building	3,5	All Hazards	<p>Problem: The local fire department does not have adequate capacity to address all community emergencies. Building is outdated and generator is not installed.</p> <p>Solution: Design and construct a new municipal safety building on Main St. that has increased resilience to flooding and severe storms and has adequate backup power to act as an emergency operations center for the community. The cost and efficiency for the fire/ems services will also support the Town of Groton – which contracts with the Fire and EMS departments.</p>	Yes	No	2 years	Village DPW and Fire Dept	High	High	HMGP, BRIC, Assistance to Firefighters Grant Program	High	SIP	SP
2021-V Groton-005	Critical Facility Outreach	All Goals	Flood	<p>Problem: The village has identified 3 Village medical facilities</p>	Yes	No	1 year	Village Board	Medium	High	Municipal Budget	High	EAP	PR



Table 9.10-19. Proposed Hazard Mitigation Initiatives

Project	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	Number Priority	Mitigation Category	CRS Category
				located within the 100-year flood zone. Solution: Because these facilities are not municipally owned, the village will need to conduct outreach to the municipality and provide potential options for acquisition and relocation, and or retrofitting options. Further improvements by the property owners would need to consult with the Town and County to apply for FEMA Funding.										

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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant Program
- PDM Pre-Disaster 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:



NFIP National Flood Insurance Program
OEM Office of Emergency Management

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



Table 9.10-20. 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	Total	High / Medium / Low
2021-V Groton-001	Flood Assessment	1	1	1	0	1	1	-1	1	1	1	1	1	1	1	11	High
2021-V Groton-002	Clay tile replacement	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-V Groton-003	William Street Debris Management	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-V Groton-004	New Municipal Safety Building	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-V Groton-005	Critical Facility Outreach	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.10.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.10-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak		004		005	005				004	
Drought		004		005	005				004	
Extreme Temperature		004		005	005				004	
Flood		001; 002; 003; 004		005	005				001; 002; 003; 004	
Harmful Algal Bloom		004		005	005				004	
Invasive Species		004		005	005				004	
Severe Storm		003; 004		005	005				003; 004	
Severe Winter Storm		004		005	005				004	
Wildfire		004		005	005				004	

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.10.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Groton followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Administration, Code Office, DPW, WWTP, Electric, Police and Fire. The Clerk represented the community on the Village of Groton 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.

Additional documentation on the Village of Groton’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

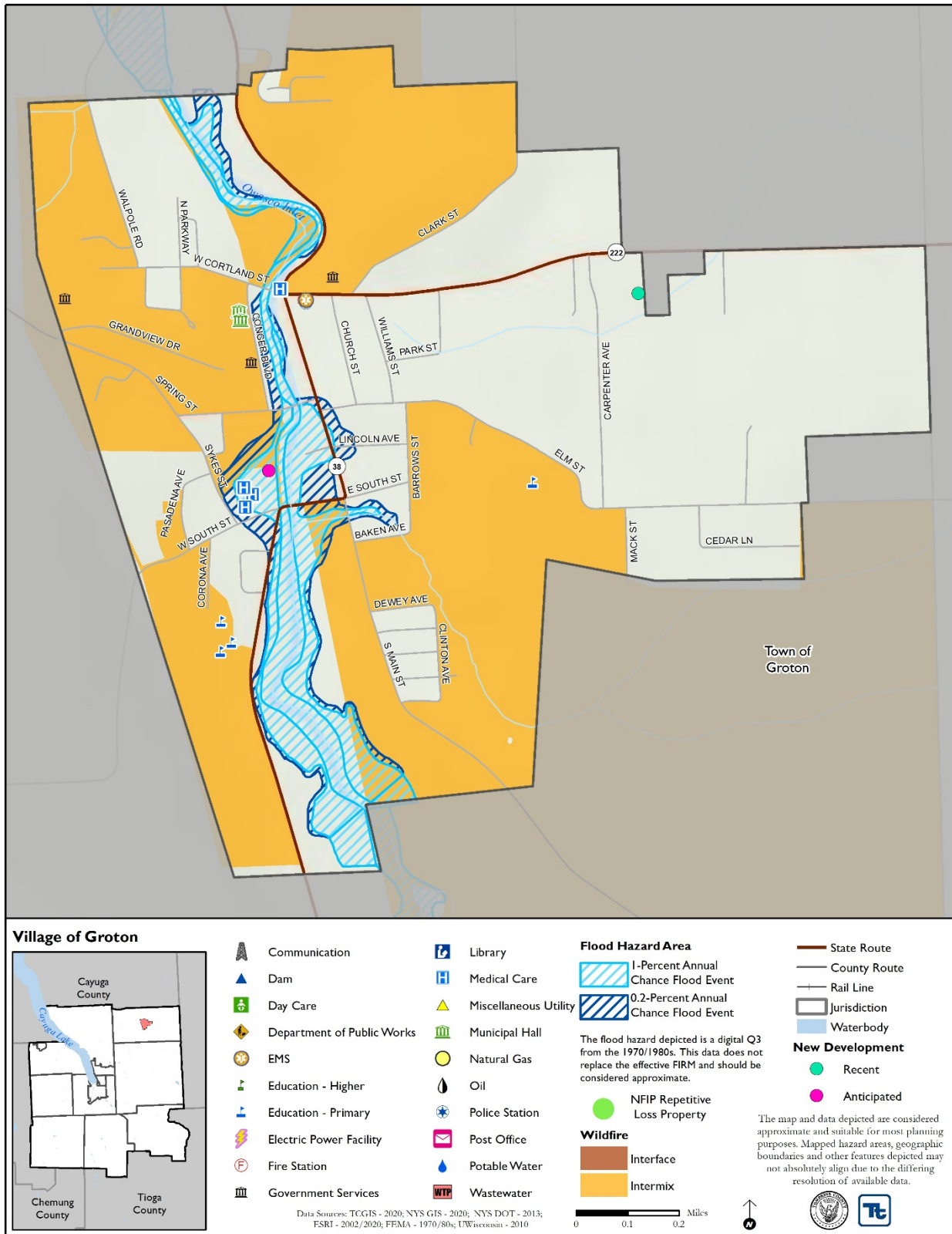


9.10.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Groton that illustrates the probable areas impacted within the Village of Groton. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Groton has significant exposure. The map is provided on the next page.



Figure 9.10-1. Village of Groton Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Clay tile replacement		
Project Number:	2021-V Groton-002		
Hazard(s) of Concern:	Flood		
Description of the Problem:	Problem: 90+ yr. old 4" & 6" clay tile on Spring St continues to cause flooding and damage to surrounding land and property.		
Action or Project Intended for Implementation			
Description of the Solution:	Analyze existing stormwater drainage system and identify actions recommended for reducing flood damage potential.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year flood	Estimated Benefits (losses avoided):	Reduced flooding in surrounding area
Useful Life:	50 years	Goals Met:	1,3,5
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, FMA, Municipal Budget
Responsible Organization:	Town DPW	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$0	Current problem continues
	Install a new tile drain system to assist with current issue.	Medium	Issue will supplement but will not solve the issue of old tile.
	Replace tile	Medium	Current problem will be resolved.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Clay tile replacement	
Project Number:	2021-V Groton-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project would save life and property during a flood event.
Property Protection	1	This project would save life and property during a flood event.
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	Project is technically feasible
Political	1	There are no political issues
Legal	1	There are no legal complications
Fiscal	-1	The county might need external funding, based on the overall scope of project
Environmental	1	This has a positive environmental impact
Social	1	This has a positive social impact
Administrative	1	The administration is supportive of this project.
Multi-Hazard	1	This project would support all hazards of concern.
Timeline	1	The timeline is feasible.
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	New Municipal Safety Building		
Project Number:	2021-V Groton-004		
Hazard(s) of Concern:	All		
Description of the Problem:	The local fire department does not have adequate capacity to address all community emergencies. The facilities are also in need of repair to an extent.		
Action or Project Intended for Implementation			
Description of the Solution:	Construction of a new municipal safety building that has increased resilience to flooding and severe storms and has adequate backup power to act as an emergency operations center for the community.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is the critical facility located in the 1% annual chance flood area?	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:	500-year flood	Estimated Benefits (losses avoided):	Community support
Useful Life:	20 years	Goals Met:	3,5
Estimated Cost:	High	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	HMGP, BRIC, Assistance to Firefighters Grant Program
Responsible Organization:	Town DPW	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$0	Current problem continues
	Retrofit and renovate existing facility	High	No expanded capacity but newer facility
	Construct new facility	High	Expanded capacity – best option
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	New Municipal Safety Building	
Project Number:	2021-V Groton-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project would save life and property during a flood event.
Property Protection	1	This project would save life and property during a flood event.
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	Project is technically feasible
Political	1	There are no political issues
Legal	1	There are no legal complications
Fiscal	-1	The county might need external funding, based on the overall scope of project
Environmental	1	This has no adverse environmental impact
Social	1	This has a positive social impact
Administrative	1	The administration is supportive of this project.
Multi-Hazard	1	This project would support all hazards of concern.
Timeline	1	The timeline is feasible.
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



9.11 City of Ithaca

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

9.11.1 Hazard Mitigation Planning Team

The following individuals have been identified as the City of Ithaca’s hazard mitigation plan primary and alternate points of contact.

Table 9.11-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael Thorne, Superintendent of Public Works Address: 108 East Green Street, Ithaca, NY 14850 Phone Number: 607-274-6531 Email: mthorne@cityofithaca.org	Name/Title: Julie Holcomb, City Clerk Address: 108 East Green Street, Ithaca, NY 14850 Phone Number: 607-274-6573 Email: jholcomb@cityofithaca.org
NFIP Floodplain Administrator	
Name/Title: JoAnn Cornish, Director of Planning and Development Address: 108 East Green Street, Ithaca, NY 14850 Phone Number: 607-274-6566 Email: jcornish@cityofithaca.org	

9.11.2 Municipal Profile

The City of Ithaca is located at the southern end of Cayuga Lake in Tompkins County in the Finger Lakes Region of New York. Ithaca is approximately 225 miles northwest of New York City. The City is the urban center, and county seat, of Tompkins County and has a population of 30,837 (2019). The City of Ithaca is home to Cornell University (and 20,000 students), and Ithaca College (7,000 students) is located just south in the Town of Ithaca. Ithaca is also home to the Tompkins County Museum, the Sciencenter, Museum of the Earth, Cayuga Nature Center, Cornell University’s Johnson Museum of Art and Lab of Ornithology, and numerous galleries and theatre spaces.



Ithaca became the county seat of Tompkins County at its formation in 1817 and was incorporated as a Village in 1821. Cornell University was founded in 1865 and brought considerable change to the area. Telephone lines were installed in Ithaca in 1878, along with electric streetlights, paved streets, and a fire alarm system. An electric street railway system was chartered in 1884. Ithaca became the 29th city in New York in 1888. In 1892, the Ithaca Conservatory of Music was founded, which later became Ithaca College. Throughout the late 19th and into the 20th century, major industrial companies, including the Ithaca Gun Company, Morse Chain and International Salt Company, created a strong economy for the growing city. The Ithaca Farmer’s Market was established in 1973 for local farmers and artisans to sell their goods to the community. In 1974, the downtown pedestrian mall, the Ithaca Commons was built in response to the large shopping malls being built outside of the city. Collegetown, adjacent to the Cornell campus, is another concentration of commercial and pedestrian activity within the city. The primary industries in Ithaca are education and agriculture, and the economy is supported by regional tourism.

The City of Ithaca has a Mayor - Council form of government. The Mayor is elected for a four-year term. There are 10 members of Common Council who represent 5 Wards in the City. Each Ward elects 2 representatives to four-year, staggered terms. There is a Chief of Staff who works with Mayor. The City has approximately 450 employees working in 11 departments.

According to the 2014-2018 American Community Survey, the population for the City of Ithaca is 30,568.

9.11.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.11-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.11-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.11-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)					



Type of Development	2014		2015		2016		2017		2018	
	NA	NA								
Single Family (R-1)	NA	NA	119	0	75	0	103	0	84	0
Multi-Family (R-2, R-3, MU)	NA	NA	453	7	390	21	406	7	373	6
Other (commercial, mixed-use, etc.)	NA	NA	356	5	387	6	364	6	391	5
Total	1,015	12	928	12	852	27	873	13	848	11
Recent Major Development and Infrastructure from 2014 to Present										
Lofts at Six Mile	Multi-Family		45 units		217 South Cayuga St		Flood		Built	
210 Hancock	Multi-Family		54 Units		210 Hancock		Flood		Built	
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
City Harbor	Multi-Family		156 Units		Pier Road				Approved	
Carpenter Park	Multi-Family		124 Units		3 rd Street				Approved	
Rothschild Bldg	Multi-Family		200 Units		State Street		None		Approved	
Vencino Project	Multi-Family		~200 Units		Green Street		None		Approved	
Chainworks Project – 95-acre industrial redevelopment on City/Town line	Mixed-Use; Multi-Family				South Hill		None		Approved	

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

**NOTED Within SFHA are those building permits where any portion of the parcel is within the SFHA. Building may or may not be in SFHA.

9.11.4 Capability Assessment

The City of Ithaca performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.11.4). The City of Ithaca identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.11.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.11-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<i>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i>					
Zoning Code	Yes	City of Ithaca Code, Chapter 325 https://www.cityofithaca.org/151/Zoning	Local	City Planning and Economic Development Division	No
Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan" ¹¹ or "in accordance with a comprehensive plan." ¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the City will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	http://www.cityofithaca.org/202/Subdivision-Application-Process-Forms	Local	City Planning and Economic Development Division	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the City updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the City encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	City Planning and Economic Development Division	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	NA	Local	NA	No
<p>Comment:</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*The City will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the City.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Growth Management Regulation	No	City does have zoning regulations connected with Comprehensive Plan	Local	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	City Planning and Economic Development Division	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a) The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the City updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	City Planning and Economic Development Division	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	Yes	Chapter 186, City Code https://ecode360.com/8389425	Local State Federal	City Planning and Economic Development Division	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The City's law meets the minimum requirements set by NYS. In the event those requirements are revised, the City will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Department of Public Works	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	With Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The City developed its CEMP in 2005 with County DOER.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Climate Adaptation	No	NYS Executive Law, Article 75	Local	NA	No
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	NA	Local	NA	No
Comment:					
Disaster Reconstruction Ordinance	No	NA	Local	NA	No
Comment:					
Emergency Preparedness Ordinance and Continuity of Government Ordinance	Yes		Local	Various	No
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Plan Ithaca (2015) https://www.cityofithaca.org/165/City-Comprehensive-Plan	Local	City Planning and Economic Development Division	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level. *When the City updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	In process (2021)	General Municipal Law Section 99-g.	Local	Multiple	No
Comment: Capital planning is performed on an annual basis with the Mayor's Office, City Controller, Planning Dept, and DPW. Mitigation projects are sometimes included in the annual capital request. Capital Improvement Plan to be developed in 2021. * This will be informed in part by the HMP mitigation strategy.					
Disaster Debris Management Plan	In process (2021)	-	Local	?	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind,					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually. Will be developed as a part of county resiliency plan. *This is being developed concurrent with the HMP.</p>					
Floodplain or Watershed Plan	No	NA	NA	NA	No
<p>Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.</p>					
Stormwater Plan	No	NA	NA	NA	No
<p>Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</p>					
Open Space Plan	Yes	NYS Constitution -Article 9; Statute of Local Governments. Section 10 (7) Included as part of Plan Ithaca	Local	City Planning and Economic Development Division	Yes
<p>Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.</p>					
Urban Water Management Plan	Yes	Local Flood Hazard Analysis	Local	Department of Public Works	No
<p>Comment: https://www.cityofithaca.org/DocumentCenter/View/11208/Local-Flood-Hazard-Analysis---City-of-Ithaca---February-2020?bidId=</p>					
Habitat Conservation Plan	No	NA	Local	NA	No
<p>Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.</p>					
Economic Development Plan	Yes	Tompkins County Economic Development Strategy (2015-2020)	Local	City Planning and Economic Development Division	No
<p>Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan http://tcad.org/content/uploads/2014/07/1577_EconReport_Digital.pdf</p>					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
<p>Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations</p>					
Community Wildfire Protection Plan	No	NA	Local	NA	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	NA	No
Comment: City does have a City Forester, and Chapter 306 of the City Code addressed Trees and Shrubs.					
Transportation Plan	Yes	2040 Long Range Transportation Plan	Local	Ithaca-Tompkins County Transportation Council	No
Comment: https://tompskinscountyny.gov/itctc/lrtp - City is also developing parking plan to become part of larger transportation plan.					
Agriculture Plan	No	NA	Local	NA	No
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers. Tompkins County has an Agriculture and Farmland Protection Plan but does not include the City of Ithaca.					
Other (tourism, business dev, etc.)					
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). City developed CEMP with County in 2005. *When the City updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the City and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	THIRA completed in 2019 for Tompkins County	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Post-Disaster Recovery Plan	No	NA	Local	NA	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
<p>Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations. No formal plan but do have Continuity of Government Ordinance. we have done continuity of operations planning twice – once in 2009 during the H1N1 Flu season, and once in 2020 during the COVID-19 Pandemic. We have departmental information about which services are mandatory to provide, which employees are needed to provide them, and how departments would assure that service delivery – we just need to tie everything together into a general plan.</p>					
Public Health Plan	No		Local	NA	No
Comment: Public Health planning conducted through County					
Other: Emergency Response Plan	Yes or No	-	Local		No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					

Table 9.11-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes: Division of Planning and Economic Development
Permits are tracked by hazard area. For example, floodplain development permits.	Yes, Division of Planning and Economic Development; City GIS
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes



9.11.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the City of Ithaca.

Table 9.11-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	PBZ&ED
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	PRNR Committee
Open Space Board/Committee	Yes	PRNR Committee
Economic Development Commission/Committee	Yes	PEDC
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	County SWIFT 911
Maintenance programs to reduce risk	Yes	-
Mutual aid agreements	Yes	Yes - DPW
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	PBZ&ED and DPW
Engineers or professionals trained in building or infrastructure construction practices	Yes	PBZ&ED and DPW
Planners or engineers with an understanding of natural hazards	Yes	PBZ&ED and DPW
Staff with expertise or training in benefit/cost analysis	Yes	Controller and Planning
Professionals trained in conducting damage assessments	Yes	Building Division, Engineering, Fire Department
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	DPW
Scientist familiar with natural hazards	Yes	DPW
NFIP Floodplain Administrator (FPA)	Yes	PBZ&ED
Surveyor(s)	No	Contract with surveyors
Emergency Manager	Yes	IFD
Grant writer(s)	Yes	Various
Resilience Officer	No	-
Other		



9.11.4.3 Fiscal Capability

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

Table 9.11-6. 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
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	Yes
Other	

9.11.4.4 Education and Outreach Capability

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

Table 9.11-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	Yes. LFHA
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes. Public Safety Commission
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes, Swift 911
Warning systems for hazard events; if yes, briefly describe.	Yes, Swift 911
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes – IPD participation in Safe Schools initiative
Other	



9.11.4.5 Community Classifications

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

Table 9.11-8. 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)	Unknown	-	-
NYSDEC Climate Smart Community	Yes	Bronze	2018
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other			

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.11.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.11-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating



The City of Ithaca has a unique tool for addressing stormwater concerns. A Stormwater User Fee has recently been assessed for every Equivalent Residential Unit (<https://ecode360.com/29575853>). The fees collected are used to help to annually support the implementation of stormwater services.

9.11.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Name/Title: JoAnn Cornish, Director of Planning and Development

Address: 108 East Green Street, Ithaca, NY 14850

Phone Number: 607-274-6566

Table 9.11-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	Descriptions and non-regulatory maps provided in recent LFHA
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	Yes, FEMA is currently in process of updating FIRMs
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Yes – City DPW has submitted for some reimbursements in the past.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	To be determined.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	City currently uses 1981 FEMA flood maps, which are outdated. Recent LFHA study provides more detail on flood risks and mitigation strategies, but it does not replace the FEMA maps from a regulatory standpoint.
Resources	



NFIP Topic	Comments
What local department is responsible for floodplain management?	Division of Planning and Economic Development
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, recently completed Local Flood Hazard Analysis
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?	N/A
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	-
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	-
What are the barriers to running an effective NFIP program in the community, if any?	Capacity to administer program
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	-
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	11/09/2015
Regulatory	
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 186 of Municipal Code https://ecode360.com/8389425 (1987)
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	N/A
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 Board evaluates flood risk when reviewing site plans and variances.
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No, potentially interested in joining CRS.



9.11.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the City of Ithaca.

Table 9.11-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
City of Ithaca	145	97	\$179,835	2	0

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL = Repetitive Loss; SRL = Severe Repetitive Loss

9.11.4.9 Additional Areas of Existing Integration

The City of Ithaca is advancing numerous efforts which incorporate key aspects of hazard mitigation. The City has done so in planning through the development of Plan Ithaca (Comprehensive Plan) as well as its work to become a certified Climate Smart Community. The City has also led the development of the Local Flood Hazard Analysis out of Public Works which helped to identify key actions to help reduce adverse flood impacts in the City. This effort further is helping to shape the update of FIRM maps. Local neighborhood plans also address a number of localized hazard concerns and works to advance cross cutting community actions.

City will further seek opportunities to advance mitigation measures through the implementation of its Comprehensive Plan.

9.11.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The City considers the State Highways to be the main evacuations routes out and around the City. Those include Routes 13, 79, 96, 34 and 89. Depending on the nature of the emergency any combination of these routes would be activated for emergency evacuation plans. The City will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.



Sheltering

The City of Ithaca has the following known emergency shelters. In the 2021 Tompkins County CEMP, ESF 6 (Mass Care) outlines the sheltering procedures for Tompkins County. The ARC and the County keep a copy of the shelter agreements established between the County, the ARC, and the facility serving as a shelter.

Table 9.11-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Boynton Middle School	1601 N. Cayuga Street, Ithaca, NY	500/200	-	-	-	-	-
Center Ithaca	171 East State Street, Ithaca, NY	500/250	-	-	-	-	-
Cornell University	554 Campus Road, Ithaca, NY	950/475	-	-	-	-	-
GIAC	301 W. Court Street, Ithaca, NY	100/50	-	-	-	-	-
Ithaca High School	1401 N. Cayuga St., Ithaca, NY	1000/500	-	-	-	-	-

Temporary Housing

The City has numerous hotels and college residence halls that can be used for temporary housing. City parks and other public lands could also serve as shelter areas depending on the severity of the emergency. In the event temporary housing is needed, the City will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as needed.

Table 9.11-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
<p>The City has numerous hotels and college residence halls that can be used for temporary housing. City parks and other public lands could also serve as shelter areas depending on the severity of the emergency. In the event temporary housing is needed, the City will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) as needed.</p>					



Permanent Housing

The City is encouraging a build out of appropriate housing density based on its prescribed density with the greatest density occurring in and around downtown Ithaca.

Table 9.11-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are various locations throughout the City of Ithaca where increases in housing density, options and availability are occurring.					

9.11.5 Hazard Event History Specific to the City of Ithaca

The City of Ithaca has a history of natural hazard events that are detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is then also provided in each of the hazard profiles and includes a chronology of events that have affected the City. Table 9.11-15 provides details regarding municipal-specific loss and damages the City experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.11-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January – Feb. 2014	Ice Jam	No	Ice jams in Cascadilla Creek resulted in adjacent flooding to Northside neighborhood	Significant staff time, equipment and materials
May 13-22, 2014	Severe Storms and Flooding (DR-4180)	Yes	On May 16, heavy rainfall resulted in flash flooding and washed out roads.	Although the City was impacted, City of Ithaca did not report any damages.
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Although the City was impacted, City of Ithaca did not report any damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Although the City was impacted, City of Ithaca did not report any damages.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Although the City was impacted, City of Ithaca did not report any damages.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Although the City was impacted, City of Ithaca did not report any damages.
October 31-November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		Although the City was impacted, City of Ithaca did not report any damages.

Notes:

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

9.11.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the City of Ithaca’s risk assessment results and data used to determine the hazard ranking.



9.11.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.11-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Andree Petroleum	Fuel	No	Yes	No
Bangs Ambulance	Emergency Services	No	Yes	No
City Water and Sewer Cold Storage	Government	No	Yes	No
City Water and Sewer Division	Government	No	Yes	No
Fingerlakes Independent Center	Non-Profit	No	Yes	No
Hydroelectric Plant	Education	Yes	Yes	Yes
Ithaca Healthcare Center	Health	No	Yes	No
Ithaca High School	Education	No	Yes	No
Ithaca Free Clinic	Health	No	Yes	No
Ithaca Wastewater Plant Treatment Plant	Government	No	Yes	No
Planned Parenthood	Health	No	Yes	No
Suicide Prevention	Health	No	Yes	No
Boynton Middle School	Education	No	Yes	No

Source: Tompkins HAZUS 2020



9.11.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County? as a whole. Therefore, the City of Ithaca ranked the degree of risk to each hazard as it pertains to the community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Ithaca. The City of Ithaca has reviewed the City hazard risk/vulnerability risk ranking table as well as its 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 of Ithaca indicated the following:

- The condition of the Fall Creek levee was an identified concern. The City will include erosion repairs on the Fall Creek levees as part of the detailed study of the floodwall systems for the City.
- The City supports the following hazard rankings identified in the plan.

Table 9.11-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.11.6.3 Identified Issues

The City of Ithaca has identified the following vulnerabilities within their community:

- Flooding continues to be the City’s most pressing vulnerability, which is why investment has been made in the City’s Flood Inundation Study to identify methods for reducing this risk.
- Drought is also a recurring concern, though redundancy plans are being established with other area water purveyors.



Specific areas of concern based on resident response to the City of Ithaca Hazard Mitigation Citizen survey include:

- Climate Change, extreme temperatures, and severe winter storms were of greatest concerns for survey respondents.
- No respondent carried flood insurance.
- Most supported a mitigation measure of informing property owners of what they can do to reduce risk.

9.11.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.11.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.11-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
C11		Flash Flood, Lake Flood, Severe Storm	City of Ithaca	Inventory storm drains and determine where retrofits needed to prevent backflow flooding		Cost	Level of Protection	Action complete as a part of Streets & Facilities and City GIS.
						Damages Avoided; Evidence of Success		
C12		Flash Flood, Lake Flood	City of Ithaca	Encourage the retrofitting of residential basement utilities		Cost	Level of Protection	No progress.
						Damages Avoided; Evidence of Success		
C13		Flash Flood, Lake Flood	City of Ithaca	Estimate costs that may be incurred to local businesses from increased flooding, particularly in the Route 13 corridor, and work with businesses to adapt to increased risk		Cost	Level of Protection	No progress but contemplated as part of action item with the County.
						Damages Avoided; Evidence of Success		
C14		Flash Flood	City of Ithaca	Analyze and map potential impacts of Hurricane Irene/Lee level precipitation in watersheds of City of Ithaca		Cost	Level of Protection	Complete as a part of City Local Flood Hazard Analysis.
						Damages Avoided; Evidence of Success		
			City of Ithaca			Cost		



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps
C15		Infestation		Create a rapid response unit in cooperation with the Tompkins County Sheriff's Department to assist in dealing with water borne invasives such as Hydrilla		Level of Protection	Ongoing effort as part of team working on the eradication of hydrilla in the Cayuga Inlet and nearby waterbodies. Should continue as action.
						Damages Avoided; Evidence of Success	
C16		Infestation	City of Ithaca	Continue to advocate for funding to support eradication of Hydrilla from Cayuga Inlet		Cost	Actively funded
						Level of Protection	
						Damages Avoided; Evidence of Success	
C17		Utility Failure	City of Ithaca	Finalize plans for an emergency generator for City Hall and the Water Filtration Plant		Cost	Action complete – both buildings have generators.
						Level of Protection	
						Damages Avoided; Evidence of Success	
C18		Ice Storm, Utility Failure	City of Ithaca	Promote underground utilities and district heating on new development projects		Cost	Underground electric service is currently underway in Collegetown. Lessons learned from this effort will be shared with future projects
						Level of Protection	
						Damages Avoided; Evidence of Success	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
C19		Water Contamination	City of Ithaca	Implement the update of the Water Filtration Plant and formalize protection of the Six Mile Creek Watershed through the development of a watershed plan that includes stream corridor protections and green infrastructure recommendations		Damages Avoided; Evidence of Success		Water Plant Complete but no formal watershed protections City works with Finger Lakes Land Trust and Tompkins County to protect upland conservation lands in Six Mile Creek.
C110		Landslide	City of Ithaca	Address creek side erosion at City of Ithaca Raw Water Intake on Six Mile Creek		Damages Avoided; Evidence of Success		Raw water pipe supports have been recently constructed to protect pipe damage from landslides. Intake work is designed and budgeted, but not yet implemented.



9.11.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The City of Ithaca has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- In order to address persistent slope stability issues on Forest Home Drive, the City coordinated the reinforcement of the sewer line support and road underpinning adjacent to Fall Creek on the Cornell University campus. All the work connected with this project is complete.

9.11.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The City of Ithaca participated in a mitigation action workshop on October 22, 2020 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: e.g., 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).

Table 9.11-19 summarizes the comprehensive range of specific mitigation initiatives the City of Ithaca would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.11-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.11-19. 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
2021-C Ithaca-001	Flood Walls and Backflow Preventers on Six Mile Creek and Cascadilla Creek	1, 3	Flood	<p>Problem: Large streamflows on Six Mile Creek and Cascadilla Creek will overtop creek banks and flood neighborhoods, according to a sophisticated flood model recently prepared by the USGS. Neighborhood flooding occurs for 50-year streamflow events and larger events.</p> <p>Solution: The channel capacity along several segments of Six Mile and Cascadilla Creeks needs to be increased. Increasing the effective height of the creek banks can contain flows from severe streamflow events. Floodwalls are one possibility for increasing channel capacity. If floodwalls were used, all storm sewer outfalls into these creeks would require check valves to prevent flooding due to backflow through the storm sewer system.</p>	No	Yes	3-5 Years	City of Ithaca DPW	\$3-4M	\$20M	BRIC, LWRP grants, Local Match	High	SIP	SP
2021-C Ithaca-002	Fall Creek Levee Repair	1, 3	Flood	<p>Problem: The south levee along Fall Creek between N. Cayuga Street and Lake Street, rebuilt nearly 40 years ago, is showing signs of erosion. This levee was breached due to erosion in the late 1970s, resulting in flooding of the Fall Creek neighborhood.</p>	Yes – Ithaca High School	Yes	3 to 5 Years	City of Ithaca DPW	\$1-10M	\$5-10M	BRIC, LWRP, Local Match	High	SIP	SP



Table 9.11-19. 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
				<p>Solution: At a minimum, the levee should be armored with large riprap or shotcrete after eroded areas are repaired. Ideally, the levees on both the north and south sides should be engineered and rebuilt to standards that meet current FEMA certification requirements.</p>										
2021-C Ithaca-003	Nuisance Flooding Analysis	1, 2	Flood	<p>Problem: The City of Ithaca is located downstream from the Town of Ithaca and Village of Cayuga Heights. Runoff from heavy downpours from surrounding municipalities causes localized nuisance flooding in several parts of the City.</p> <p>Solution: An intermunicipal engineering study is needed to determine causes of the nuisance flooding and identify mitigation measures. Because two or more municipalities (and municipal budgets) are involved, there has been insufficient coordinated drainage design and construction projects.</p>	No	No	3-10 Years	City of Ithaca DPW, Town of Ithaca DPW, Cayuga Heights DPW	\$1M	Avoiding Road Closures, wet basements, eroded channels	Local funds, BRIC	Medium	SIP	SP
2021-C Ithaca-004	Cayuga Inlet Flood Control Channel	1, 2, 3	Flood	<p>Problem: The Flood Control Channel at Cayuga Inlet is not functioning as designed and is no longer certified by the ACOE.</p>	No	Yes	3 Years	NYSDEC	High	Flood reduction to adjacent residences	BRIC, NYSDEC	High	SIP	SP



Table 9.11-19. 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
	Maintenance			Solution: Dredge in and around the Cayuga Inlet Flood Control Channel to reduce threat of flood inundation and maintain levee function as required by ACOE.						and businesses				
2021-C Ithaca-005	Dam Maintenance	1	Flood, Severe Storm	<p>Problem: The City's 60' Dam on Six Mile Creek requires structural reinforcing and in advance requires dredging to the connected Silt Dam, 60' and 30' dams to reduce flood risk in the City of Ithaca.</p> <p>Solution: Outline steps required for structural reinforcement for 60' and 30' dams including the dredging of those facilities and develop a funding strategy for implementing this work.</p>	Yes	Yes	2 Years	City of Ithaca	\$7M	Proper dam function and flood risk reduction	BRIC, Local Match	Med	SIP	SP
2021-C Ithaca-006	Hydroelectric Plant Resiliency Assessment	1, 2	Flood, Severe Storm	<p>Problem: Cornell hydroelectric plant is a critical facility that lies within 100-year floodplain. Its susceptibility to flood and severe storm events is unclear.</p> <p>Solution: Because these facilities are not municipally owned, the City will conduct outreach to Cornell to investigate any retrofitting options to improve flood mitigation. If measures are recommended apply for FEMA funding to advance improvements.</p>	Yes	Yes	5 Years	City of Ithaca, Cornell University	Unknown	Unknown	Local Funds, BRIC	Med	SIP	SP
2021-C Ithaca-007	Repetitive Loss	1,2,3	Flood Severe Storm	Problem: There are currently 2 NFIP repetitive loss properties in the community.	No	No	1 year	City of Ithaca	Low	Improved understandin	Municipal Budget	Med	EAP	PR



Table 9.11-19. 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
	Property Outreach			Solution: Conduct outreach to flood-prone property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the areas that experience frequent flooding.						g of risk reduction				
2021-C Ithaca-008	30 and 60-Foot Dam	1,2	Flood, Severe Storms	<p>Problem: The City of Ithaca’s 30 and 60-foot dams are classified as a class C “high hazard” dams and pose a threat to the surrounding community.</p> <p>Solution: The City of Ithaca will conduct outreach to the dam owner and operator about the condition of the dam and potential risks posed by a dam failure and support an inspection plan of the dam by an engineer in accordance with the existing EAP and NYSDEC Dam Safety guidelines. The City will aid in the development of an updated EAP as needed. If updates have been completed on the dam, the City will request an inspection by NYSDEC to reclassify the dam.</p>	Yes	No	Short, within 5 years	City of Ithaca	Low	High	Municipal Budget	High	EAP	PR



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
HMGF	Hazard Mitigation Grant Program
PDM	Pre-Disaster 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*



Table 9.11-20. 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	Total	High / Medium / Low
2021-C Ithaca-001	Flood Walls and Backflow Preventers on Six Mile Creek and Cascadilla Creek	1	1	1	1	1	1	0	1	1	1	0	1	1	0	11	High
2021-C Ithaca-002	Fall Creek Levee Repair	1	1	1	1	1	1	0	1	1	1	0	1	1	0	11	High
2021-C Ithaca-003	Nuisance Flooding Analysis	0	1	0	1	1	1	1	1	1	1	0	1	1	1	11	High
2021-C Ithaca-004	Cayuga Inlet Flood Control Channel Maintenance	1	1	0	0	0	1	0	0	1	1	1	1	1	1	9	High
2021-C Ithaca-005	Dam Maintenance	1	1	0	1	0	0	1	1	1	1	1	0	1	0	9	High
2021-C Ithaca-006	Hydroelectric Plan Resiliency Assessment	0	1	1	0	0	0	1	0	0	1	1	0	0	0	5	Med
2021-C Ithaca-007	Repetitive Loss Property Outreach	1	1	1	0	0	0	0	0	1	0	0	1	0	1	6	Med
2021-C Ithaca-008	30 and 60-Foot Dam	1	1	1	1	1	1	0	1	1	0	1	1	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.11.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.11-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak										
Drought										
Extreme Temp										
Flood		001; 002; 003; 004; 005; 006		007; 008	007; 008				001; 002; 003; 004; 005; 006	
Harmful Algal Bloom										
Invasive Species										
Ground Failure										
Severe Storm		005006		007; 008	007; 008				005	
Severe Winter Storm										
Wildfire										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.11.9 Staff and Local Stakeholder Involvement in Annex Development

The City of Ithaca followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many City departments, including: The Department of Public Works and City Clerk. Mike Thorne represented the community on the City of Ithaca 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. Julie Conley Holcomb further helped to support the planning process as active member of the Planning Partnership. 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.

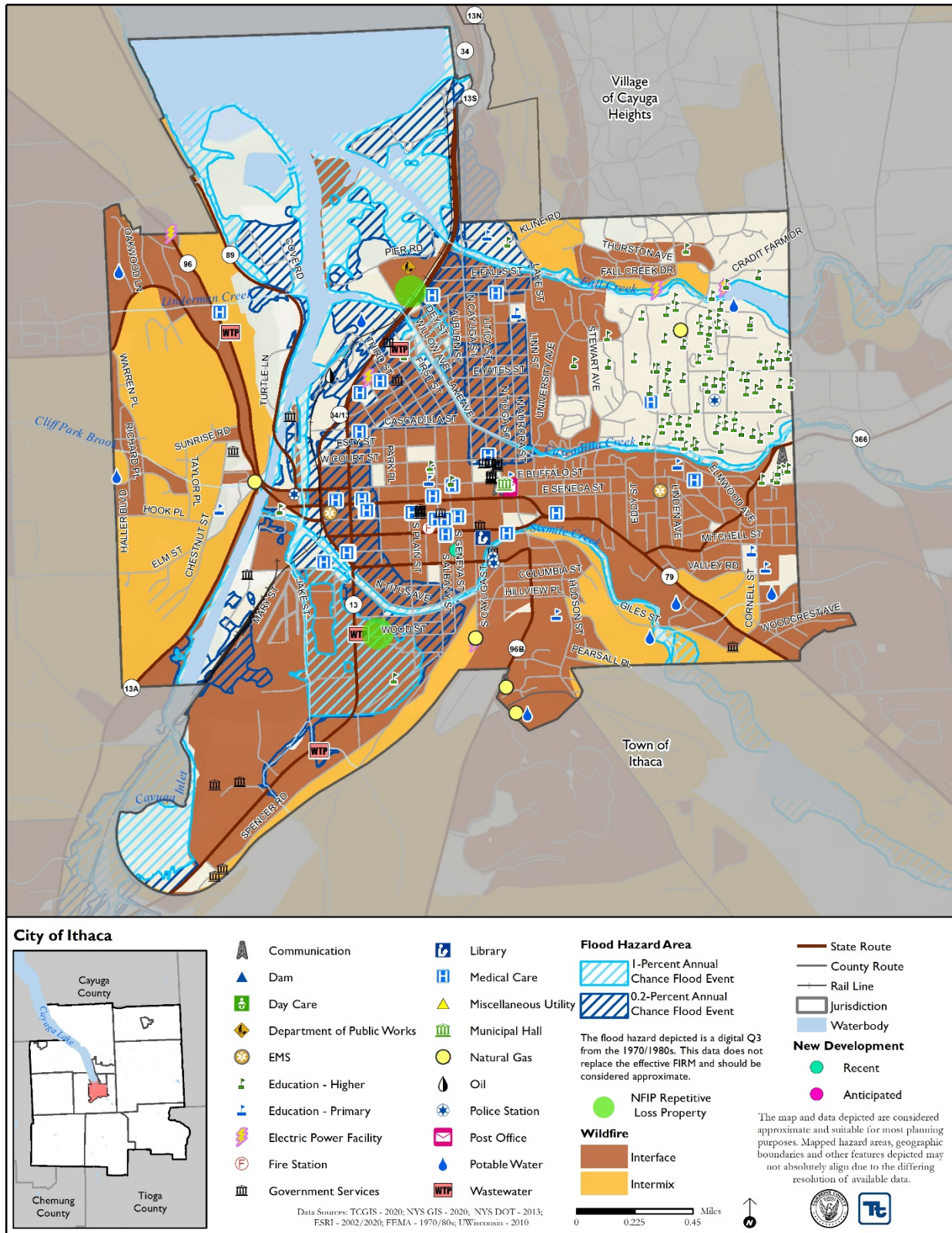
Additional documentation on the City of Ithaca's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.11.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the City of Ithaca that illustrates the probable areas impacted within the City of Ithaca. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the City of Ithaca has significant exposure. The map is illustrated below.



Figure 9.11-1. City of Ithaca Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Flood Walls and Backflow Preventers on Six Mile Creek and Cascadilla Creek		
Project Number:	2021-C Ithaca-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	Large streamflows on Six Mile Creek and Cascadilla Creek will overtop creek banks and flood neighborhoods, according to a sophisticated flood model recently prepared by the USGS. Neighborhood flooding occurs for 50-year streamflow events and larger events.		
Action or Project Intended for Implementation			
Description of the Solution:	The channel capacity along several segments of Six Mile and Cascadilla Creeks needs to be increased. Increasing the effective height of the creek banks can contain flows from severe streamflow events. Floodwalls are one possibility for increasing channel capacity. If floodwalls were used, all storm sewer outfalls into these creeks would require check valves to prevent flooding due to backflow through the storm sewer system.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input 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)			
Level of Protection:	100-year flood	Estimated Benefits (losses avoided):	\$20 million
Useful Life:	75 years	Goals Met:	Goal 1--Resiliency
Estimated Cost:	\$3-4 million	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Start in 1 year
Estimated Time Required for Project Implementation:	3 to 5 years	Potential Funding Sources:	BRIC LWRP grants Local match
Responsible Organization:	City of Ithaca DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, USGS report/model
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current risk continues
	Floodwall/Backflow Preventer	\$3-4 million	LFHA Report shows high effectiveness
	Dredge creeks to increase capacity	\$1-2 million?	Recurring work. Permitting issues. Potential unintended consequences.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Flood Walls and Backflow Preventers on Six Mile Creek and Cascadilla Creek	
Project Number:	2021-C Ithaca-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	Benefit/Cost Ratio >5
Technical	1	The municipality has the technical capabilities to conduct this project
Political	1	Aesthetics, access, and views of creek will be important. Temporary system should be considered (temporary use only during emergencies)
Legal	1	There are no legal challenges with this project
Fiscal	0	Funding would need to be secured
Environmental	1	The project has a positive environmental impact
Social	1	Provides flood protection throughout various neighborhoods and land uses. Aesthetics need to be considered.
Administrative	1	DPW will maintain
Multi-Hazard	0	This project only prevents flooding
Timeline	1	The timeline is adequate
Agency Champion	1	City of Ithaca
Other Community Objectives	0	None claimed thus far
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Fall Creek Levee Repair		
Project Number:	2021-C Ithaca-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	The south levee along Fall Creek between N. Cayuga Street and Lake Street, rebuilt nearly 40 years ago, is showing signs of erosion. This levee was breached due to erosion in the late 1970s, resulting in flooding of the Fall Creek neighborhood.		
Action or Project Intended for Implementation			
Description of the Solution:	At a minimum, the levee should be armored with large riprap or shotcrete after eroded areas are repaired. Ideally, the levees on both the north and south sides should be engineered and rebuilt to standards that meet current FEMA certification requirements.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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)			
Level of Protection:	High	Estimated Benefits (losses avoided):	Needs to be modeled. Estimate \$5-10 million
Useful Life:	50 years	Goals Met:	Goal 1--Resiliency
Estimated Cost:	\$1-\$10 million	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Start within 2 years
Estimated Time Required for Project Implementation:	3 to 5 years	Potential Funding Sources:	BRIC, LWRP Grant, Local Match
Responsible Organization:	City of Ithaca DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Potential breach and breakage of levee
	Repair erosion on south levee and armor with riprap and/or shotcrete	\$1-2 million	Will address threat, but won't meet FEMA levee certification
	Engineer and rebuild north and south levees to meet FEMA levee certification requirements	\$10 million?	Long term solution. Lower flood insurance rates if levees are certified
Progress Report (for plan maintenance)			
Date of Status Report:			



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



Action Worksheet		
Project Name:	Fall Creek Levee Repair	
Project Number:	2021-C Ithaca-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The municipality has the technical capabilities to conduct this project
Political	1	There is no political opposition to the project
Legal	1	There are no legal challenges with this project
Fiscal	0	The project requires additional funding that the city does not have
Environmental	1	The project has a positive environmental impact
Social	1	The project has a positive social impact
Administrative	1	The municipality has the proper administrative capabilities
Multi-Hazard	0	This project only prevents flooding
Timeline	1	The timeline is adequate
Agency Champion	1	City of Ithaca
Other Community Objectives	0	None claimed thus far
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Nuisance Flooding		
Project Number:	2021-C Ithaca-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	The City of Ithaca is located downstream from the Town of Ithaca and Village of Cayuga Heights. Runoff from heavy downpours from surrounding municipalities causes localized nuisance flooding in several parts of the City.		
Action or Project Intended for Implementation			
Description of the Solution:	An intermunicipal engineering study is needed to determine causes of the nuisance flooding and identify mitigation measures. Because two or more municipalities (and municipal budgets) are involved, there has been insufficient coordinated drainage design and construction projects.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	Medium	Estimated Benefits (losses avoided):	Road closures, wet basements, eroded channels
Useful Life:	50 Years	Goals Met:	Goal 1--Resiliency
Estimated Cost:	\$1 million (design & const.)	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Start engineering design in 1 year
Estimated Time Required for Project Implementation:	3-10 years. Phase in projects as funding allows	Potential Funding Sources:	Local Funds BRIC
Responsible Organization:	City of Ithaca DPW Town of Ithaca DPW Village of Cayuga Heights DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Upland Mitigation	High	Reduce concentrated flow
	Downstream Infrastructure	High	Accommodate increased flow
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Nuisance Flooding	
Project Number:	2021-C Ithaca-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	The project protects life
Property Protection	1	This project protects property
Cost-Effectiveness	0	The project is cost effective
Technical	1	The municipality has the technical capabilities to conduct this project
Political	1	Intermunicipal nature may make this more complex.
Legal	1	There are no legal challenges with this project
Fiscal	1	Phased projects over time using local budgets. Grant funding should be sought.
Environmental	1	The project has a positive environmental impact
Social	1	The project has a positive social impact
Administrative	1	The municipality has the proper administrative capabilities
Multi-Hazard	0	This project only prevents flooding
Timeline	1	Some projects could be started sooner rather than later
Agency Champion	1	City of Ithaca
Other Community Objectives	1	Sustainability
Total	11	
Priority (High/Med/Low)	Medium	



9.12 Town of Ithaca

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

9.12.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Ithaca’s hazard mitigation plan primary and alternate points of contact.

Table 9.12-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Dan Thaete, Town Engineer Address: Town of Ithaca Phone Number: 273-1656 x225 Email: DThaete@town.ithaca.ny.us	Name/Title: Susan Ritter, Director of Planning Address: Town of Ithaca Phone Number: 273-1736x120 Email: SRitter@town.ithaca.ny.us
NFIP Floodplain Administrator	
Name/Title: Marty Moseley – Director of Code Enforcement Address: 215 North Tioga Street, Ithaca, NY 14850 Phone Number: 607-273-1783 Email: mmoseley@town.ithaca.ny.us	

9.12.2 Municipal Profile

The Town of Ithaca surrounds the City of Ithaca on all sides, and is a mix of rural, urban, and suburban landscapes. The Town of Ithaca encompasses 30 square miles, including the Village of Cayuga Heights, and is home to three State Parks, and many smaller town parks and trails. Fall Creek, Cascadilla, Buttermilk, Enfield Glen, and Six Mile Creek and their respective gorges cross run throughout the Town. Parts of Cornell University, and the Ithaca College campus are located within the Town. Also found in Ithaca is the Cayuga Medical Center; EcoVillage, a community dedicated to sustainable living; and the Namagyal Monastery, the center for Tibetan Buddhism in the United States. New York State Routes 13, 34, 79, 98B, and 366 converge in the Town of Ithaca.

The Ithaca was designated as a Military Tract for Revolutionary War veterans in 1782, with the first white settlers arriving in 1789. A post office was established in 1804, and Tompkins County was created in 1817. The Town of Ithaca was incorporated in 1821, separating from the Town of Ulysses. Flour, lumber, and whiskey mills lined



the creeks in Ithaca, and manufacturing grew in the 19th century with the Ithaca Gun Company and the Ithaca Calendar Clock Company, and the town grew with Cornell University's founding in 1865. The main industry in the town today is education and agriculture, supplemented by tourism to the Finger Lakes region.

The Town of Ithaca is governed by a six-member Town Board, elected for four-year terms, and a Town Supervisor, elected for two-year terms. Other Town Committees include the Agriculture committee, codes and ordinances committee, conservation board, planning board and committee, public works committee, and the zoning board of appeals.

According to the 2014-2018 American Community Survey, the Town of Ithaca's population is 16,233.

9.12.3 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 understanding a jurisdiction's overall risk to its hazards of concern. Table 9.12-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.12-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)										
Single Family	19	0	28	1	6	1	7	0	6	1
Multi-Family	7	0	5	0	6	0	33	0	7	0
Other (commercial, mixed-use, etc.)	3	0	13	0	9	0	6	0	2	0
Total	29	0	46	1	21	1	46	0	15	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 2014 to Present										
Maplewood Redevelopment	Apartments for College Student	495		201 Maple Ave		0		Complete		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Amabel Subdivision		30		5 Mile Dr.		0		Planning Board Approved		

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.



9.12.4 Capability Assessment

The Town of Ithaca performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.12.4). The Town of Ithaca identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.12.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.12-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<i>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Zoning Code	Yes	Chapters 270: Zoning (https://www.ecode360.com/8661341) & 271: Zoning: Special Land Use Districts (https://www.ecode360.com/8663020)	Town	Code Enforcement & Planning Departments, Zoning Board of Appeals, Planning Board	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Chapter 234: Subdivision of Land (https://www.ecode360.com/8660770)	Town	Town Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Chapter 228: Stormwater Management and Erosion and Sediment Control (https://www.ecode360.com/8660454)	Town	Engineering Department	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	N/A	Local	N/A	No
<p>Comment: The Town is participating in the development of the county-wide resiliency/recovery plan.</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Growth Management Regulation	No	N/A	N/A	N/A	No
<p>Comment: In New York State, virtually all land use regulation, which is the primary tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	Chapter 270, Article XXII: Site Plan Review and Approval Procedures https://www.ecode360.com/8662406	Town	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617 Chapter 148: Environmental Quality Review https://www.ecode360.com/8658815	State Town	Zoning Board of Appeals, Planning Board, Town Board	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRA) Chapter 157: Flood Damage Protection https://www.ecode360.com/8658984	Local, State, Federal Town	Code Enforcement Department	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	Chapter 228: Stormwater Management and Erosion and Sediment Control https://www.ecode360.com/8660454	Town	Engineering Department	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					
Climate Adaptation	No	NYS Executive Law, Article 75	Local	-	Yes
<p>Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</p>					
Disaster Recovery Ordinance	No	NA	Local	NA	No
<p>Comment:</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Disaster Reconstruction Ordinance	No	NA	Local	NA	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	-	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	Comprehensive Plan, September 2014 (http://www.town.ithaca.ny.us/comprehensive-plan)	Town	Planning Department; Town Board	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level.</p> <p>*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	Yes	Upon request at Town Hall or Public Works Facility	Town	Public Works, Engineering, Planning, Accounting Departments; Town Board	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	NA	No
<p>Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</p> <p>*The Town is developing a debris management plan in conjunction with the County.</p>					
Floodplain or Watershed Plan	No	-	Local	NA	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes	Town of Ithaca Stormwater Management Plan dated January 2011	Local	Engineering Department	Yes
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	Yes	Town of Ithaca Park, Recreation and Open Space Plan, 1997	Town	Planning, Engineering, and Public Works Departments; Town Board	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	NA	No
Comment:					
Habitat Conservation Plan	No	-	Local	NA	No
Comment: Laws related to habitat protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	NA	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	Yes	Town of Ithaca Transportation Plan, 2007	Town	Planning, Engineering, Public Works Departments; Town Board	No
Comment:					
Agriculture Plan	Yes	Agricultural and Farmland Protection Plan, 2011 (http://www.town.ithaca.ny.us/town-agriculture/farm-protection-plan)	Town	Planning Department; Town Board	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	No	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency	No	NYS Executive Law, Article 2B	Local	Local OEM	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Management Plan					
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.</p>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
<p>Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.</p>					
Post-Disaster Recovery Plan	No	-	Local	-	No
<p>Comment:</p>					
Continuity of Operations Plan	No	-	Local	-	No
<p>Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations." *The Town is participating with training with the County.</p>					
Public Health Plan	No	-	Local	-	-
<p>Comment:</p>					
Other: Emergency Response Plan	No	-	Local	-	No
<p>Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.</p>					
<p>Other: Special Purpose Ordinances (such as critical or sensitive areas)</p>					
<p>Comment:</p>					

Table 9.12-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes – Planning Department/Engineering Department
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No



9.12.4.2 Administrative and Technical Capability

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

Table 9.12-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Department (Planning Board)
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Planning Department (Conservation Board)
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Planning Department (Economic Development Committee)
Warning Systems / Services (mass notification system, outdoor warning signals)	No	-
Maintenance programs to reduce risk	Yes	Public Works/Engineering Department(s)
Mutual aid agreements	Yes	Public Works Department
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning and Engineering Departments
Engineers or professionals trained in building or infrastructure construction practices	Yes	Code Enforcement and Engineering Departments
Planners or engineers with an understanding of natural hazards	Yes	Planning and Engineering Departments
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Code Enforcement, Engineering and Public Works Departments
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Engineering and Planning Departments
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Department
Surveyor(s)	Yes	Engineering Department
Emergency Manager	No	-
Grant writer(s)	Yes	Planning and Town Clerk Departments
Resilience Officer	No	-
Other	-	-

9.12.4.3 Fiscal Capability

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

Table 9.12-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	No
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes



Financial Resources	Accessible or Eligible to Use (Yes/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	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	Yes
Other	No

9.12.4.4 Education and Outreach Capability

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

Table 9.12-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes – Town Clerk
Personnel skilled or trained in website development?	Yes – Network / Record Specialist
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes – Town Facebook (https://www.facebook.com/Town-of-Ithaca-NY-115601466558988) and Twitter (https://twitter.com/IthacaTown) accounts could be used if necessary
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	No

9.12.4.5 Community Classifications

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

Table 9.12-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3 (Residential) 4 (Commercial)	2017



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	02/2Y	8/29/16
NYSDEC Climate Smart Community	Yes	N/A	2009-086
Storm Ready Certification	NP	-	-
Firewise Communities classification	NP	-	-
Other	NP	-	-

Note:

N/A Not applicable
NP Not participating
- Unavailable

9.12.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions.

The Town a Green Building Policy that is being drafted, as well as a Green New Deal Committee that reviews and proposes green policies for the maintenance and purchasing of Town owned buildings, equipment, vehicles, etc.

The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.12-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High

*High Capacity exists and is in use
Medium Capacity may exist; but is not used or could use some improvement
Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

9.12.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.



NFIP Floodplain Administrator (FPA)

Marty Moseley, the Town’s Director of Code Enforcement serves as the FPA.

Table 9.12-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	<ul style="list-style-type: none"> Lake shore area along, Forest Home Creek - area, and Five Mile Drive and the Cayuga Inlet area. Yes, if a building permit was issued, we have all files electronically.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	<ul style="list-style-type: none"> No Unknown
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	FEMA is updating mapping in the Town and City of Ithaca with a tentative timeline of 2 years to be finished.
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	As defined in the NYS Uniform Code and as defined in Chapter 157 of Town Law
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	Four properties have been built in compliance with flood laws since 2014-2019, which were privately funded.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	No, they are maps from the 1980’s which do not represent the most accurate flood data.
Resources	
What local department is responsible for floodplain management?	Code Enforcement and Engineering Departments
Are any certified floodplain managers on staff in your jurisdiction?	No, but attend we have attended floodplain training
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Would prefer to attend more training on an annual basis.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Permit review, site plan review, GIS mapping, education/outreach, inspections, engineering of Town projects, issuance of permits, etc.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Based on the definition in Chapter 157 of Town Law and the NYS Uniform Code.



NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	Mapping needs to be updated.
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	Not that we are aware of.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	1/8/2016
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	Chapter 157: Flood Damage Prevention (https://www.ecode360.com/8658984) amended in its entirety 5-11-1987 by L.L. No. 9-1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets management program
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?	All projects that proceed to the Planning Board are analyzed for impacts on contiguous properties, which may include flooding or conveyance of water.
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No

9.12.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.12-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Ithaca	21	20	\$36,215.01	1	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss



9.12.4.9 Additional Areas of Existing Integration

The Town of Ithaca has long understood the connections between hazard mitigation, conservation and land use. This is shown in many ways including through the development of its local stream setback law. This law is the most robust in the County which frames specific setbacks from streams based on the size of their contributing watersheds. The Town further invests in the hazard – conservation – land use commitment through its local agriculture conservation easement program and farmland protection planning efforts.

Mitigation work at the Town can further be integrated with the Town’s Comprehensive Plan implementation.

9.12.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

Town of Ithaca relies on the NYS Routes for evacuation through and around town. Based on the nature of the emergency a combination of State Routes 79, 34, 13, 96 and 89 will be utilized. However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The following are currently known shelters located in the Town of Ithaca.

Table 9.12-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Bethel Grove Bible Church Family Center	1749 Slaterville Road, Ithaca, NY	102	-	-	-	-	-
Cornell University - Various Locations	-	2150/1075	-	-	-	-	-
Dewitt Middle School	560 Warren Road, Ithaca, NY	375/187	-	-	-	-	-



Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
TST Boces	555 Warren Road, Ithaca, NY	400/200	-	-	-	-	-

Temporary Housing

The Town does not currently have any land noted for temporary housing. However, there are several hotels and residence halls in the Town and has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.12-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
In the event temporary housing is needed, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.					

Permanent Housing

The Town notes areas throughout its municipality for increased permanent housing as outlined in its Land Use Code. In addition, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The municipality can utilize this analysis to identify potential locations.

Table 9.12-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
See TOI Zoning Map					

9.12.5 Hazard Event History Specific to the Town of Ithaca

Town of Ithaca has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the Town and its municipalities. The Town of Ithaca's history of federally declared



(as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Town of Ithaca. Table 9.12-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.12-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
May 13-22, 2014	Severe Storms and Flooding (DR-4180)	Yes	On May 16, heavy rainfall resulted in flash flooding and washed out roads.	While this event impacted the community, due to lack of resources damage history has not been documented.
August 3, 2014	Heavy Rain and Flash Flooding	-	Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
June 14-15, 2015	Heavy Rain and Flash Flood	-	A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	While this event impacted the community, due to lack of resources damage history has not been documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	While this event impacted the community, due to lack of resources damage history has not been documented.
July 24, 2017	Heavy Rain and Flash Flooding	-	Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	-	While this event impacted the community, due to lack of resources damage history has not been documented.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)



N/A Not applicable

9.12.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Ithaca’s risk assessment results and data used to determine the hazard ranking.

9.12.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.12-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
WATER INTAKE F CR INLET A-F (FOREST HOME)	Government	No	Yes	-
VEG CROPS PUMP HOUSE	Education	Yes	Yes	2021T. Ithaca 018
RESOURCE ECOLOGY AND MANAGAMENT LAB	Education	Yes	Yes	2021T. Ithaca 018
IPD RANGE	Government	Yes	Yes	2021T. Ithaca 018
BRIDGE FISH HATCHERY	Education	Yes	Yes	2021T. Ithaca 018
AQUACULTURE BUILDING	Education	Yes	Yes	2021T. Ithaca 018
30- and 60-Foot Dams	Dam	Yes	Yes	2021T. Ithaca 018

Source: Tompkins HAZUS



9.12.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Town of Ithaca 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 Ithaca. The Town of Ithaca has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Ithaca indicated the following:

- While a range of hazards are of concern in the Town, flooding presents the most concern and also most opportunities for mitigation.

Table 9.12-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	High
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.12.6.3 Identified Issues

The Town of Ithaca has identified the following vulnerabilities within their community:

- Flooding, Severe Storm and Drought present the highest concerns.

Specific areas of concern based on resident response to the Town of Ithaca Hazard Mitigation Citizen survey include:

- Lyme disease was noted as an associate concern with climate change.
- Investments in infrastructure was seen as the best mitigation.
- Most felt that the Town cares about their well-being in relation to hazard events.



- The impact of increase in heavy rain events on local drainage systems are an increasing concern. These structures can often be overwhelmed now after heavy rain storms and flood driveways and basements because street drainage is inadequate. This is made worse when inadequate drainage is not required with new developments and increase in hard scape causes water run off rather than absorption. This ultimately impacts water quality in the Lake.

9.12.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.12.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.12-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
T11		Flash Flood, Landslide	Town of Ithaca	Establish conservation corridors and green infrastructure along stream banks to encourage riparian vegetation for channel and floodplain stabilization and wildlife habitat. Priority focus area should be bank stabilization of the intermittent streams which flow into Six Mile Creek like those near the Six Mile Creek Vineyard.	Ongoing	Cost	-	Working with the Cayuga Lake Watershed Intermunicipal Organization to obtain funding for stream bank stabilization/restoration.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
T12		Severe Storm	Town of Ithaca	Analyze drainage issues that occur post large storm events at corner of Pine Tree Road / Ellis Hollow / Mitchell Roads as well as Route 13 at Buttermilk Falls Road and implement appropriate mitigation measures.	Ongoing	Cost	-	Monitoring County, State, and local projects, in the areas of concern, in efforts to mitigate the drainage issues.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
T13		Utility Failure, Ice Storm	Town of Ithaca	Promote underground utilities on new development projects	Ongoing	Cost	--	Promote the installation of underground utilities as development projects progress through the Planning/Approval process. Local code(s) have been established outlining the requirement(s) of underground utility installation.
						Level of Protection	-	
						Damages Avoided;		



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success		



9.12.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Ithaca has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

2015-Installation of a 72" SRPE pipe within the existing/damaged drainage pipe beneath Elm Street Extension-Coy Glen Creek. Pipe was damaged during a heavy rain/flash flood storm event in 2014.

9.12.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Ithaca participated in a mitigation action workshop in October 2020 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: e.g., 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).

Table 9.12-19 summarizes the comprehensive range of specific mitigation initiatives the Town of Ithaca would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.12-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.12-19. 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
2021 T Ithaca - 001	NYS RT 13A/Glenside Road Drainage Modifications	1, 4	Flood	<p>Problem: NYS RT 13A (Five Mile Dr.) at Glenside Rd. intersection. During large rainstorm events roadside swales and backlot drainage swale overtop and flood roadway and adjacent properties.</p> <p>Solution: Install regional stormwater management device upstream to mitigate runoff. Review drainage along roadway for possible upgrades.</p>	No	No	1 Year	Town of Ithaca, NYSDOT	\$500,000	Road damage, accessibility, property damage	BRIC, HMGP, Local Match	Medium	SIP	SP
2021 T Ithaca - 002	Code Enforcement Cloud Permit Program	1-5	All Hazards	<p>Problem: The Code Enforcement Department does not have access to documents or plans outside of Town Hall due to limitations of current practices. This is problematic when assessing damaged buildings, and when attempting to see what impacts the damaged building may have on the public safety or health impact. This delays the response of an assessment program</p> <p>Solution: Purchase a cloud-based software to enhance electronic permitting, code enforcement activities, record retention system, plan review, and provide for online access to model code to the Public. The cloud-based software system will allow for a faster response time and allow for all files to be accessed during an emergency event</p>	No	No	1 Year	Town of Ithaca	\$610,000	Require elevation of structures in identified flood areas, when required, avoid loss of life when rapid assessment is required for structurally damaged buildings during natural and man-made events. Allow for increased communication between departments.	BRIC, HMGP, State Funds, Local Match	High	SIP	PR



Table 9.12-19. 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
2021 T Ithaca - 003	Water Supply Redundancy	1,3	Drought	<p>Problem:With the City and Town's growing population and increased exposure to droughts during the summer due to climate change, Ithaca continues to struggle with inadequate water supply for its residents.</p> <p>Solution:The city of Ithaca can conduct a study to examine potential new sources for backup water supply during the summer, or potential collaboration with neighboring municipalities to expand overall capacity during the summer drought months.</p>	Yes	No	2 Years	TOI	Unknown	Added drought resilience	NYS DOS Resiliency Plan Funding	High	SIP	PR
2021 T Ithaca - 004	HABs Response Planning	1,5	HABs	<p>Problem:Cayuga Lake has elevated cases of harmful algal bloom</p> <p>Solution: Collaborate with neighboring municipalities also along Cayuga Lake such as through the intermunicipal organization to create a Tompkins County-specific response plan to address increasing levels of Harmful Algal Bloom.</p>	No	Yes	5 Years	Tompkins County Planning	Unknown	Unknown	Local Funds, NYSDEC WQIP	Med	NSP	PR
2021 T Ithaca - 005	Disease Management	1	Disease Outbreak	<p>Problem:Ithaca is unique in terms of the overall size of the City/ Town and the high number of university students with the presence of Cornell University, Ithaca College, and to an extent Tompkins Cortland Community College. While the universities act</p>	No	No	5 Years	Tompkins County Health	Unknown	Unknown	Local Funds	Med	LPR	PR



Table 9.12-19. 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
				<p>as major economic stakeholders within the community, they also pose a significant threat to the local communities around disease outbreak. Thus, local residents are constantly vulnerable to students (who are often from out of town) spreading and exacerbating disease outbreaks.</p> <p>Solution: While it is unrealistic to confine students to specific areas of the city, in cases where disease outbreak is spread through physical contact, the city and town of Ithaca might consider developing an emergency action plan in preparation for such an event and having procedures in place to reduce physical contact and thus transmission, especially to local communities.</p>										
2021 T Ithaca - 006	Tree Management Program	3,5	Severe Storm, Severe Winter Storm	<p>Problem: Severe Storms and Winter Storms often result in downed trees and loss of power and property damages.</p> <p>Solution: The Town could develop tree maintenance programs to assess and monitor at-risk trees and develop a schedule to remove these trees. The Town could also consider grounding utility lines or tree pruning and monitoring near utility lines.</p>	No	No	5 Years	TOI	Unknown	Reduced tree damage to public and private property	Local funds, NYSDEC	Med	NSP	NR, PP



Table 9.12-19. 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
2021 T Ithaca - 007	Flash Flood Study	4,5	Flood	Problem: The Town experiences flash flood events and subsequent damages. This leads to road closures, damages, and emergency rescues. Solution: Conduct a study to determine the cause of flash flood events and identify problem areas. Once study is complete, the municipality will review the findings, determine the best solution(s), and implement projects.	No	No	5 Years	TOI, City DPW	Unknown	Unknown	NYSDEC WQIP, HMGP	Med	SIP	PP, SP
2021 T Ithaca - 008	Fish Hatchery Analysis	5	Flood	Problem: Bridge Fish Hatchery is located in the 1% annual chance flood area. Solution: Outreach to determine if facility is designed to withstand a 100-year flood and if not, provide information about the flood risk and alternatives to relocation.	Yes	Yes	5 Years	TOI	Unknown	Unknown	Local Funds	Med	SIP	PP
2021 T Ithaca - 009	AquaCulture Analysis	All	Flood	Problem: Aquaculture Building is located in the 1% annual chance flood area. Solution: Outreach to determine if facility is designed to withstand a 500-year flood and if not, provide information about the flood risk and alternatives to relocation.	Yes	Yes	5 Years	TOI	Unknown	Unknown	Local Funds	Med	SIP	PP
2021 T Ithaca - 010	Resource Ecology Lab Analysis	All	Flood	Problem: Resource Ecology and Management Lab is located in the 1% annual chance flood area.	Yes	Yes	5 Years	TOI, Cornell	Unknown	Unknown	Local Funds	Med	SIP	PP



Table 9.12-19. 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
				Solution: Outreach to determine if facility is designed to withstand a 100-year flood and if not, provide information about the flood risk and alternatives to relocation.										
2021 T Ithaca - 011	Ithaca Police Range Analysis	All	Flood	Problem: IPD Range is located in the 1% annual chance flood area. Solution: Outreach to determine if facility is designed to withstand a 100-year flood and if not, provide information about the flood risk and alternatives to relocation.	Yes	Yes	5 years	TOI, City of Ithaca	Unknown	Unknown	Local Funds	Med	SIP	PP
2021 T Ithaca - 012	Tributary Analysis	All	Flood	Problem: City Flooding due to Town Streams Solution: Coordinate with City to study certain areas in the Town that may impact the City due to potential flooding of specific areas of the City.	No	Yes	3 Years	TOI	Unknown	Unknown	Local Funds, NYSDEC WQIP	Med	NSP	PP, NR, SP
2021 T Ithaca - 013	Sandbank Road Retrofit	1,3	Flood	Problem: Lower end or portion of Sandbank Road located in the 1% annual chance flood area Solution: Elevate the road where the road system is impacted by the 1% annual chance of flooding area	No	No	5 Years	TOI DPW	Unknown	Unknown	Local Funds, BRIC	Med	PP	SP
2021 T Ithaca - 014	Drainage Swales Retrofit	1,3	Flood	Problem: NYS RT 79 (Slaterville Rd.) between Honness Ln. and Burns Road, flooding of drainage swales along east side of roadway Solution: Conduct a study to determine the cause of flash flood in this area. Once study is complete, the municipality will review the findings, determine the	No	No	5 Years	TOI	Unknown	Unknown	Local Funds	Med	PP	SP



Table 9.12-19. 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
				best solution(s), and implement project(s).										
2021 T Ithaca - 015	East Shore Drive Analysis	All	Flood	Problem: NYS RT 34 (East Shore Dr.) Ithaca/Lansing Town Line, south to NYS RT 13. Flooding of roadside swales. Solution: Conduct a study to determine the cause of flash flood in this area. Once study is complete, the municipality will review the findings, determine the best solution(s), and implement project(s).	No	No	5 Years	TOI	Unknown	Unknown	Local Funds	Med	PP	SP
2021 T Ithaca - 016	13A Roadside Ditch Analysis	All	Flood	Problem: NYS RT 13A (Five Mile Dr.) at Glenside Rd. intersection. Flooding of roadside swales due to rear-lot drainage swale discharge from Glenside Rd. properties. Solution: Conduct a study to determine the cause of flash flood in this area. Once study is complete, the municipality will review the findings, determine the best solution(s), and implement project(s).	No	No	5 Years	TOI DPW	Unknown	Unknown	Local Funds	Med	PP	SP
2021 T Ithaca - 017	Repetitive Loss Property Outreach	1	Flood	Problem: There are some repetitive loss properties in the Town. Solution: Conduct outreach to flood-prone property owners and provide information on mitigation alternatives and flood risk. After preferred mitigation measures are	No	No	3 Years	TOI	Unknown	Unknown	Local Funds	Med	EAP	PP, PI, PR



Table 9.12-19. 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
				identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the areas that experience frequent flooding.										
2021 T Ithaca 018	Critical Facility Resiliency Assessment	1,2	Flood, Severe Storm	<p>Problem: The VEG CROPS PUMP HOUSE, RESOURCE ECOLOGY AND MANAGAMENT LAB, IPD RANGE, BRIDGE FISH HATCHERY, AQUACULTURE BUILDING, and 30- and 60-Foot Dams are all identified critical facilities located in the 100-year floodplain.</p> <p>Solution: Because these facilities are not municipally owned, the Town will conduct outreach to Cornell and the City of Ithaca to investigate any retrofitting options to improve flood mitigation. If measures are recommended apply for FEMA funding to advance improvements.</p>	Yes	Yes	5 Years	Town of Ithaca	Unknown	Unknown	BRIC, Local Funds	Med	SIP	SP

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
 Pre-Disaster 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



Table 9.12-20. 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	Total	High / Medium / Low
2021 T. Ithaca - 001	NYS RT 13A/Glenside Road Drainage Modifications	0	1	1	1	0	1	1	1	-1	1	0	1	0	0	6	Medium
2021 T. Ithaca - 002	Code Enforcement Cloud Permit Program	1	1	1	1	1	1	1	1	0	0	1	1	1	1	12	High
2021 T. Ithaca - 003	Water Supply Redundancy	1	1	1	1	1	1	0	0	0	0	1	1	1	0	9	High
2021 T. Ithaca - 004	HABs Response Planning	1	1	0	1	0	0	0	1	0	1	0	0	1	0	6	Med
2021 T. Ithaca - 005	Disease Management	1	0	1	1	0	0	0	1	1	0	0	1	1	1	8	Med
2021 T. Ithaca - 006	Tree Management Program	0	1	1	0	1	0	0	1	0	0	0	1	0	0	5	Med
2021 T. Ithaca - 007	Flash Flood Study	1	1	0	0	1	0	0	1	1	0	0	0	0	0	5	Med
2021 T. Ithaca - 008	Fish Hatchery Analysis	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med
2021 T. Ithaca - 009	AquaCulture Analysis	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med



Table 9.12-20. 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	Total	High / Medium / Low
2021 T. Ithaca - 010	Resource Ecology Lab Analysis	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med
2021 T. Ithaca - 011	Ithaca Police Range Analysis	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med
2021 T. Ithaca - 012	Tributary Analysis	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med
2021 T. Ithaca - 013	Sandbank Road Retrofit	0	1	0	0	1	0	0	1	0	1	1	0	0	0	6	Med
2021 T. Ithaca - 014	Drainage Swales Retrofit	1	1	0	0	1	0	0	1	0	1	1	0	0	0	6	Med
2021 T. Ithaca - 015	East Shore Drive Analysis	1	1	0	0	1	0	0	1	0	1	1	0	0	0	6	Med
2021 T. Ithaca - 016	13A Roadside Ditch Analysis	1	1	0	0	1	0	0	1	0	1	1	0	0	0	6	Med
2021 T. Ithaca - 017	Repetitive Loss Property Outreach	1	1	1	0	0	0	0	0	1	0	0	0	0	1	5	Med
2021 T. Ithaca - 018	Critical Facility Resiliency Assessment	0	1	1	1	0	0	0	1	0	0	0	1	0	0	5	Med

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.12.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.12-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Invasive Species		002			002					
Flood		002			002					
Flood		001, 002, 007, 008, 009, 010, 011, 013, 014, 015, 016, 018	012	017	002	007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017	017	012,	001, 002, 012, 018	
Severe Storm		002, 018	006		002	006		006	018	
Severe Winter Storm		002	006		002	006		006		
HABs		002	004		002					
Drought		002, 003			002, 003, 004					
Disease		002	005		002, 005					

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.12.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Ithaca followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Code Enforcement, Public Works and Planning. Dan Thaete, Marty Moseley, and Sue Ritter represented the community on the Town of Ithaca 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.



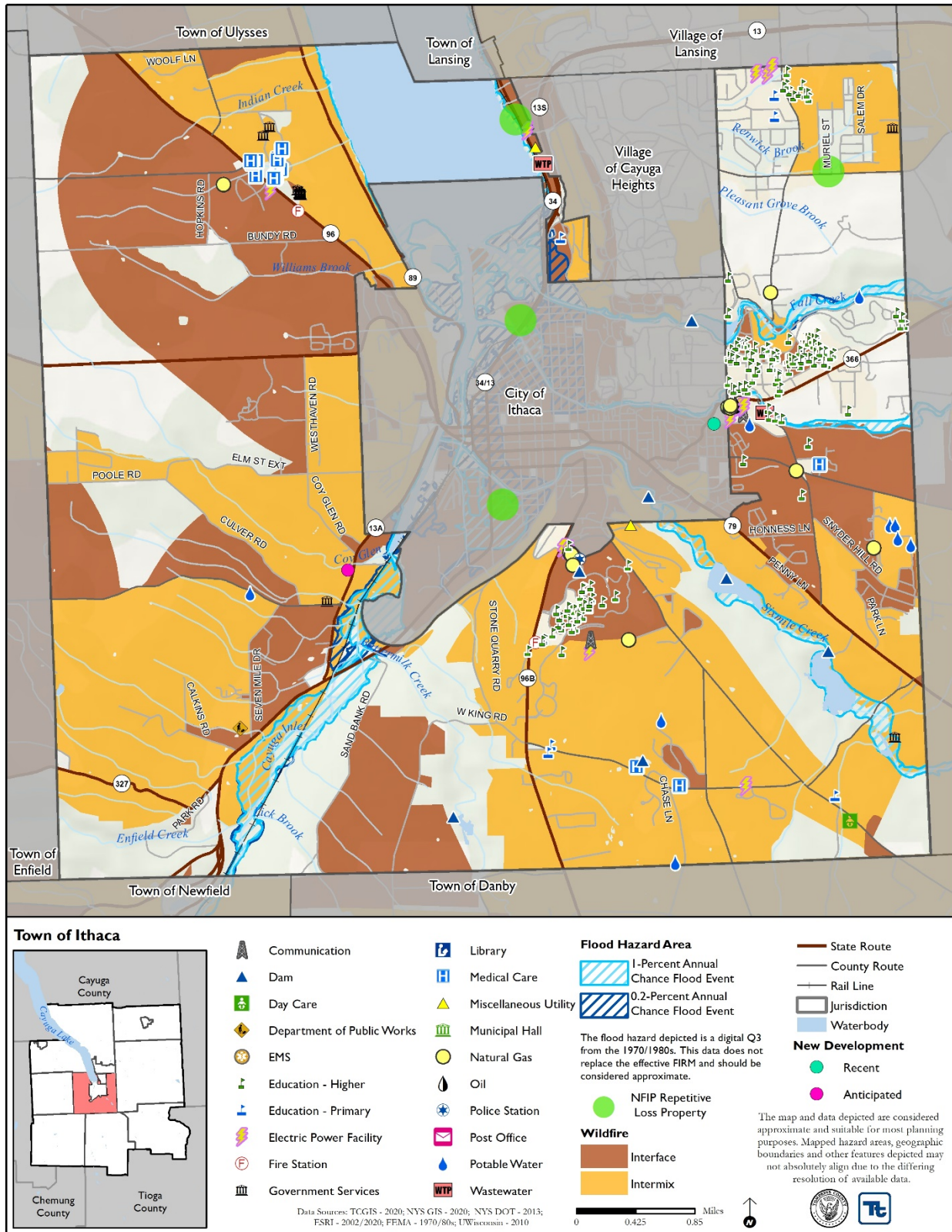
Additional documentation on the Town of Ithaca’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.12.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Ithaca that illustrates the probable areas impacted within the Town of Ithaca. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Ithaca has significant exposure. The map is provided on the next page.



Figure 9.12-1. Town of Ithaca Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	NYS RT 13A/Glenside Road Drainage Modifications		
Project Number:	2021 T. Ithaca - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	NYS RT 13A (Five Mile Dr.) at Glenside Rd. intersection. During large rainstorm events roadside swales and backlot drainage swale overtop and flood roadway and adjacent properties.		
Action or Project Intended for Implementation			
Description of the Solution:	Install regional stormwater management device upstream to mitigate runoff. Review drainage along roadway for possible upgrades.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input 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)			
Level of Protection:	2-100-year storm events	Estimated Benefits (losses avoided):	Road damage, accessibility, private property damage
Useful Life:	30 yrs.	Goals Met:	1,3,4
Estimated Cost:	\$500,000	Mitigation Action Type:	SIP, NSP
Plan for Implementation			
Prioritization:	Low	Desired Timeframe for Implementation:	3-5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	local
Responsible Organization:	Town of Ithaca, NYSDOT	Local Planning Mechanisms to be Used in Implementation if any:	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	NYS RT 13A/Glenside Road Drainage Modifications	
Project Number:	2021 T. Ithaca - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	The projects has limited protection for life safety
Property Protection	1	The project prevents flooding
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project has adequate technical backup
Political	0	The project has adequate political support
Legal	1	The project has adequate legal support
Fiscal	1	The project has adequate funding
Environmental	1	There are no environmental issues with the project
Social	-1	There can be social implications for this project
Administrative	1	There are no administrative issues
Multi-Hazard	0	This project only prevents flooding
Timeline	1	The timeline is adequate
Agency Champion	0	Agency championship has not been identified
Other Community Objectives	0	Not identified at this point
Total	6	
Priority (High/Med/Low)	Low	



Action Worksheet			
Project Name:	Code Enforcement Cloud Permit Program		
Project Number:	2021 T. Ithaca - 002		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm, Extreme Temperature		
Description of the Problem:	The Code Enforcement Department does not have access to documents or plans outside of Town Hall due to limitations of current practices. This is problematic when assessing damaged buildings, and when attempting to see what impacts the damaged building may have on the public safety or health impact. This delays the response of an assessment program		
Action or Project Intended for Implementation			
Description of the Solution:	Purchase a cloud-based software to enhance electronic permitting, code enforcement activities, record retention system, plan review, and provide for online access to model code to the Public. The cloud-based software system will allow for a faster response time and allow for all files to be accessed during an emergency event		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input 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)			
Level of Protection:	100-year (1%) flood	Estimated Benefits (losses avoided):	Require elevation of structures in identified flood areas, when required, avoid loss of life when rapid assessment is required for structurally damaged buildings during natural and man-made events. Allow for increased communication between departments.
Useful Life:	10 yrs.	Goals Met:	1, 2, 3, 4, 5,
Estimated Cost:	\$610,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	1-2 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Local, State, Federal
Responsible Organization:	Town of Ithaca	Local Planning Mechanisms to be Used in Implementation if any:	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Potential loss or records due to outdated system, potential loss of life in extreme circumstances dealing with assessment of damaged buildings, lack of communication to other departments



			which could lead to staff wasting time conducting multiple inspections on the same building from separate departments.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Code Enforcement Cloud Permit Program	
Project Number:	2021 T. Ithaca - 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Program will identify when others have inspected damaged property and would limit the number of inspections being conducted on one structure, so several inspectors are not inspecting the same building at different times.
Property Protection	1	Program would allow for staff to determine if a property is located in a flood area, which may require certain construction codes to be updated at the time of a building permit being issued.
Cost-Effectiveness	1	Cost to implement are inevitable due to required technology being utilized to create a more effective use of time and improve communication across multiple departments.
Technical	1	Program purchase is technically feasible
Political	1	There is support by the Town Board Members to purchase a new program to improve communication between departments and with the public. Program may allow for public to gain information easier on a property.
Legal	1	Yes, the Town can legally authorize the use of a software program to benefit the departments and the public.
Fiscal	1	The Town has budgeted some monies for this project, but it is undetermined if we will be able to achieve other funding sources to purchase a cloud-based program.
Environmental	1	Environmental permits could be issued by the Town Engineering Department (SWPPP) and therefore would have an overall positive impact so one can track when environmental permits have not been issued for work being conducted.
Social	0	
Administrative	0	Yes, we have staff that will need to take on additional responsibilities to implement this software system, but the benefits outweigh the negative impact that this would have on the community.
Multi-Hazard	1	Software program can be used across all departments, so Engineering can issue stormwater permits and Code Enforcement can issue building permits. All staff can monitor each property and verify that the improvements are not having a negative impact on their specific areas of expertise, like environmental or building codes. This would allow us to verify that structures
Timeline	1	Timeline would be expected to be completed in 1-2 years, which would possibly allow the use of the system withing 18 months.
Agency Champion	1	Yes, Marty Moseley
Other Community Objectives	1	This software program would further our endeavors to be a green community thus reducing the amount of paper that we receive for permit applications.
Total	12	



9.13 Town of Lansing

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

9.13.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Lansing’s hazard mitigation plan primary and alternate points of contact.

Table 9.13-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
C.J. Randall, Director of Planning 29 Auburn Road, Lansing, NY 14882 607-533-7054 crandall@lansingtown.com	Ed LaVigne, Town Supervisor 29 Auburn Road, Lansing, NY 14882 607-533-8896 elavigne@lansingtown.com
NFIP Floodplain Administrator	
C.J. Randall, Director of Planning 29 Auburn Road, Lansing, NY 14882 607-533-7054 crandall@lansingtown.com	

9.13.2 Municipal Profile

The Town of Lansing is the second largest in Tompkins County, encompassing 60.7 square miles. The northern part of the town is largely farmland, generating one third of the total farm product sales in Tompkins County, making it a vital farming community. The western border of Lansing is shaped by Cayuga Lake, and is bordered on the east by the towns of Groton and Dryden, and on the south by the town and city of Ithaca. The Village of Lansing is located in the southern part of the town, surrounding New York State Route 13.

Lansing was settled as a Revolutionary War Veteran Military Tract town in 1794 and was an original settlement of Tompkins County at its founding in 1817. Farming has been the main industry in Lansing since its settlement. Today, Lansing has over 17,000 acres of farmland that provides over 100 jobs. The majority of the farmlands support dairy farms. From 1890 until 1962 the International Salt Company operated on Myers Point, drawing



salt from the salt beds along the shore of Cayuga Lake. The Village of Lansing was incorporated in 1974, and is home to the Ithaca Tompkins International Airport, and the county's largest mall.

Lansing is governed by an elected four-person Town Board serving four-year terms, and an elected Town Supervisor, serving two-year terms.

According to the 2014-2018 American Community Survey, the Town of Lansing population is 7,912.

9.13.3 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 understanding a jurisdiction's overall risk to its hazards of concern. Table 9.13-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.



Figure 9.13-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.13-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	25	0	22	0	18	0	23	0	8	0
Multi-Family	38	0	46	0	47	0	44	0	122	0
Other (commercial, mixed-use, etc.)	4	0	9	0	2	0	2	0	2	2
Total	67	0	77	0	67	0	69	0	132	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 2014 to Present										
Asbury Hill major subdivision	Single-family housing	28, including all phases of Whispering Pines		Warren and Asbury Roads		No		Under construction		
Village Circle / Village Solars	apartments	423 units		1067 Warren Road		No		Under construction		
Milton Meadows	apartments	72 units		1-10 Robins Way		No		Complete		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Ludlowville Bridge	Infrastructure	1		Ludlowville road		Flood		Planned		
Salmon Creek Bridge	Infrastructure	1		Salmon Creek Road		Flood		Planned		
Construction of Consolidated Water District Ext. No. 5	New water main loop	1		E Shore Drive		NONE		Planned		
Construction of Consolidated Water District Ext. No. 3	New municipal water	1		E Shore Drive		NONE		Planned		

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.13.4 Capability Assessment

The Town of Lansing performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the



components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.13.4). The Town of Lansing identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.13.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.13-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
Comments: <i>NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i>					
Zoning Code	Yes	Town Code	Local	Town Zoning Board of Appeals	No
Comment: <i>Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan"</i>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level https://ecode360.com/33033958</p> <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Town Code	Local	Town Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (General City Law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730). https://ecode360.com/33031443</p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Stormwater Management Officer	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	-	Local	-	No
<p>No comment</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Growth Management Regulation	No	No	Local	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primary tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Town Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</p> <p>*When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	?	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Flood Damage Prevention Law	Yes	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRA)	Local, State, Federal	Planning & Code Enforcement Department	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Planning & Code Enforcement Department	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	No, but involved in Climate Smart Communities	NYS Executive Law, Article 75	Local	Planning & Code Enforcement Department	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	NA	Local	NA	No
Comment:					
Disaster Reconstruction Ordinance	No	NA	Local	NA	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Planning & Code Enforcement Department	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	Yes	General Municipal Law Section 99-g.	Local	NA	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	NA	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	No	-	Local	NA	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	No	-	Local	NA	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	No, but currently completing Inventory and Open Space Index	NYS Constitution -Article 9; Statute of Local Governments. Section 10 (7)	Local	NA	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local	NA	No
Comment:					
Habitat Conservation Plan	No	-	Local	NA	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	NA	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	-	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
No Comment					
Transportation Plan	No	-	Local	-	No
No Comment					
Agriculture Plan	Yes	NYCRR Part 390 Agricultural and Farmland Protection -	Local	Planning & Code Enforcement Department	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers. https://ecode360.com/33031443					
Other (tourism, business dev, etc.)	No	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). As a part of County CEMP. *When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Not sure	-	Local	-	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	Yes, in process of being adopted	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Public Health Plan	No	-	County DOH	-	No
Comment:					
Other: Emergency Response Plan	Yes	Reviewed by TCDER Community Preparedness Coordinator in September 2019	Local	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment: None					

Table 9.13-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Planning & Code Enforcement Department
Permits are tracked by hazard area. For example, floodplain development permits.	Planning & Code Enforcement Department
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No, the Town intends to complete a buildout analysis following CAC completion of the aforementioned NRI and Open Space Index

9.13.4.2 Administrative and Technical Capability

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

Table 9.13-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning & Code Enforcement Department
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Planning & Code Enforcement Department
Open Space Board/Committee	Yes	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & Code Enforcement Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineers, T.G. Miller, P.C.



Resources	Available? (Yes or No)	Department/ Agency/Position
Planners or engineers with an understanding of natural hazards	Yes	Town Engineers, T.G. Miller, P.C.
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	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Director of Planning
Surveyor(s)	Yes	Town Engineers, T.G. Miller, P.C.
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other	No	-

9.13.4.3 Fiscal Capability

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

Table 9.13-6. 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	Yes – Drainage District
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	-

9.13.4.4 Education and Outreach Capability

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

Table 9.13-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes



Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	-

9.13.4.5 Community Classifications

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

Table 9.13-8. Community Classifications

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

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.13.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.13-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Extreme Temperature	Medium



Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

**High Capacity exists and is in use*

Medium Capacity may exist; but is not used or could use some improvement

Low Capacity does not exist or could use substantial improvement

Unsure Not enough information is known to assign a rating

9.13.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

C.J. Randall, Director of Planning is the FPA.

Table 9.13-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	Flooding is most significant in and around the portion of the Town on Cayuga Lake, in particular Ladoga Park.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Haven't had to do, but planning and code enforcement would make that determination.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	Unknown.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes, or at least I believe the new FEMA Seneca Watershed maps will once they are adopted.
Resources	
What local department is responsible for floodplain management?	Planning & Code Enforcement Department



NFIP Topic	Comments
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Potentially, particularly how to use added resources available through map updates.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Utilize digitized maps from County Natural Resources Inventory and assess impacts on case by case basis.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Town Engineers, T.G. Miller, P.C. conduct reviews on all Floodplain Development Permit applications
What are the barriers to running an effective NFIP program in the community, if any?	None.
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	04/12/2011
Regulatory	
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	Local Law 9 of 2016, codified to https://ecode360.com/33310674
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets minimum requirements.
Are there other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, this is considered by the Zoning Board or Planning Board, where applicable.
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	No

9.13.4.8 National Flood Insurance Program (NFIP) Summary

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



Table 9.13-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Lansing	34	55	\$466,075	8	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL=Repetitive Loss; SRL=Severe Repetitive Loss

9.13.4.9 Additional Areas of Existing Integration

The Town of Lansing has integrated mitigation into several of its planning and regulation practices. In 2020, the Town developed its own Natural Resource Inventory which will help to guide development and conservation measures. The Town also updated its Flood Damage Prevention law in 2016 which sharpens municipal focus on flood protection. This update will provide good guidance to other municipalities as they consider updating their Flood Damage Prevention Law.

The Town of Lansing will integrate mitigation actions with the implementation of their Comprehensive Plan particularly in terms of conservation, energy and land use actions.

9.13.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Town relies on State Routes for evacuation including State Route 34 and 34B around and through the community. Evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The following locations are active shelter locations. In the 2021 Tompkins County CEMP, ESF 6 (Mass Care) outlines the sheltering procedures for Tompkins County. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.



Table 9.13-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Lansing High School	300 Ridge Road, Lansing, NY	520/260	Yes	Yes	Not Documented	Unsure	None
Lansing Middle School	6 Ludlowville Road, Lansing, NY	273/136	Yes	Yes	Not Documented	Unsure	None
Raymond Buckley Elementary	284 Ridge Road, Lansing, NY	187/93	Yes	Yes	Not Documented	Unsure	None

Temporary Housing

The Town has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the Town will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Table 9.13-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
There are no temporary housing locations identified.					

Permanent Housing

The Town identifies area for increased permanent housing locations in its land use code. While the Town has not identified specific potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations.



Table 9.13-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
See Town of Lansing Zoning Code.					

9.13.5 Hazard Event History Specific to the Town of Lansing

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Lansing’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.13-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.13-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding	No	Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	Although the Town was impacted, Town of Lansing did not report any damages.
June 14-15, 2015	Heavy Rain and Flash Flood	No	A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	Although the Town was impacted, Town of Lansing did not report any damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	Although the Town was impacted, Town of Lansing did not report any damages.
July 24, 2017	Heavy Rain and Flash Flooding	Yes	Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	Although the Town was impacted, Town of Lansing did not report any damages.
October 31-November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	-	Although the Town was impacted, Town of Lansing did not report any damages.

Notes:

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

9.13.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Lansing’s risk assessment results and data used to determine the hazard ranking.

9.13.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.13-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No critical facilities in the Town of Lansing are currently exposed to potential flood losses.				

9.13.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Town of Lansing 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 Lansing. The Town of Lansing has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Lansing indicated that the Town of Lansing supports the rankings identified as a part of the mitigation plan effort.

Table 9.13-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	High
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Medium



Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.13.6.3 Identified Issues

The Town of Lansing has identified the following vulnerabilities within their community:

- The Town has not designated a safe and functional location for a Town emergency operations center, likely because the County Emergency Operations Center is located nearby in the Village of Lansing.
- As the Town's population increases and the risk of flood increases, the Town should consider development of disaster preparedness plans such as evacuation plans, continuity of operations plans, and a long-term recovery plan, preferably integrated into the existing Emergency Preparedness Plan (2017).

Specific areas of concern based on resident response to the Town of Lansing Hazard Mitigation Citizen survey include:

- There are no noted findings from the citizen survey.

9.13.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.13.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.13-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TL1	Finalize the Ludlowville Stormwater Control Project	Flash Flood	Town of Lansing	The Hamlet of Ludlowville experienced repeated flooding of residences during storm events due to both topography and failing stormwater infrastructure. DEC WQIP funding was obtained to identify the source of flooding and design a range of solutions to address it. Ultimately, uphill detention pond was built to titrate water before entering hamlet.	Complete	Cost	\$480,000 project (\$240K from State; \$240K County match)	Discontinue – project has been completed
						Level of Protection	Significant detainment achieved; designed to detain water for up to the 50-year storm event.	
						Damages Avoided; Evidence of Success	Several extreme weather events have occurred in Tompkins County over the last several years, including a May 2017 Presidential Disaster Declaration for flooding, and no flood damage was reported in the Hamlet of Ludlowville.	
TL2	Implement stream restoration efforts on Salmon Creek	Flash Flood	Town of Lansing	The Hamlet of Ludlowville experienced repeated flooding of residences	Complete	Cost	\$200,000 project (\$150K from FEMA; \$50K County/Town match)	Discontinue – project has been completed



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	at Salmon Creek Road			during storm events due to both topography and failing stormwater infrastructure. In 2015, Tompkins County utilized NYS funds to build an uphill detention pond to help address flooding. This project sought to stabilize the tributary that led from the detention pond to Salmon Creek.		Level of Protection	Project stabilized streambank and installed 8 check dams and step pools along 500' of stream. Project was designed to allow water to pass downstream culverts for up to 50-year storm events.	
						Damages Avoided; Evidence of Success	Project stable and functional after 5 months.	
TL3	Retrofitting Assistance	Lake Flood	Town of Lansing	Assist with the retrofitting or acquisition of properties with high exposure to lake flooding in and around Myers Point/Ladoga Park	Incomplete	Cost	Moderate	Continue this action, active, but not yet complete. - 006
						Level of Protection	Low	
						Damages Avoided; Evidence of Success	Flood Mitigation	
TL4	Communication System	Flash Flood, Lake Flood, Ice Jam	Town of Lansing	Improve communication with the Department of Environmental Conservation to assist in clarifying the need and	Complete	Cost	Moderate	Complete – discontinued.
						Level of Protection	Moderate	
						Damages Avoided; Evidence of Success	All Hazard Types	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				support for the permitting of regular maintenance of the mouth of Salmon Creek to reduce flooding of residences and community infrastructure		Level of Protection		



9.13.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Lansing has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- The Town and Tompkins County implemented the second phase of the FEMA funding flood control project on tributary to Salmon Creek in 2018.

9.13.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Lansing participated in a mitigation action workshop in October 2020 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: e.g., 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).

Table 9.13-19 summarizes the comprehensive range of specific mitigation initiatives the Town of Lansing would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.13-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.13-19. 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
2021 – T LANSING–001	Salmon Creek stream realignment	3	Flood	<p>Problem: Lateral migration of Salmon Creek stream channel, due to blockage of the historic channel, deposition of excessive amounts of sediment and subsequent shifting of the channel alignment. The shifting channel alignment has created a situation where the stream flows 90 degrees perpendicular to the roadway, directly impacting the roadway right of way and roadway embankment.</p>	No	No	2 Years	Town of Lansing	\$300,000	Flood Mitigation	NYSDEC WQIP, FEMA FMA	High	NSP	NR
				<p>Solution: The Town of Lansing, in cooperation with Tompkins County Soil & Water Conservation District, proposes a long-term stabilization strategy include realignment of approximately 1,650 feet of Salmon Creek, a major tributary of Cayuga Lake, extending 110 feet upstream and 550 feet downstream of the current impacted roadbed area.</p>										
	HABs Outreach	3	HABs	<p>Problem:The town of Lansing has significant exposure to</p>	No	No	5 years	Town Board	Low	Moderate	Municipal Budget	High	EAP	PI



Table 9.13-19. 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
2021 – T LANSING - 002				<p>Cayuga Lake, and thus is vulnerable to HABs</p> <p>Solution: Increase community understanding through continued outreach around HABs. Because Lansing is a contributing factor with the high amount of agricultural land within the township, the municipality might also consider conducting a study to reduce overall runoff and implement practices to reduce overall waterbody contamination.</p>										
2021 – T LANSING - 003	Living Snow Fence	3	Severe Winter Storm	<p>Problem: Snow drifts create hazardous driving conditions.</p> <p>Solution: Install permanent vegetative barriers to decrease the wind strength and protect roads from potential snow drifts and whiteouts.</p>	No	No	2 years	Town DPW	Moderate	High	Municipal Fund, HMGP	High	SIP	SP
2021 – T LANSING - 004	Farm Drought Planning	1,3	Drought	<p>Problem: Increasing dry conditions are leading to higher overall vulnerability to farmers that rely on well water for their crops.</p> <p>Solution: Increase water supply by exploring alternate water sources within the township that can provide reliable sources of drinking water without extending water mains/lateral extensions to</p>	No	No	5 years	Planning Board	Moderate	High	Municipal Funds, WQIP	High	LPR	PR



Table 9.13-19. 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
				farmland. Alternatively, expand municipal water supply to collaborate with neighboring municipality water infrastructure.										
2021 – T LANSING - 005	Tree Maintenance	1,4	Severe Storm	<p>Problem: Severe Storms have produced powerful winds in the past that have caused trees to fall and cause power interruptions.</p> <p>Solution: The municipality will develop a vegetation management program that will include routine inspections in municipal rights-of-way, identify trees that are in need of trimming or removal, and conduct the trimming and removal. This will help reduce or eliminate infrastructure damage, road closures, and power outages during severe storm or severe winter storm events. Additionally, the municipality will work with the utility companies to clear and/or maintain trees along the utility lines.</p>	No	No	5 years	Town DPW	Low	High	HMGP	High	NSP	PR, NR
2021 – T LANSING - 006	Repetitive Loss Property Outreach	1,2	Flood	<p>Problem: High number of repetitive loss properties remain in the Town.</p> <p>Solution: Conduct pointed outreach to those remaining lakeside repetitive loss</p>	No	No	6 Months	Town of Lansing; Tompkins County	\$1,000	Substantial	Local funds; FEMA resources	Medium	EAP	PP



Table 9.13-19. 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
				properties that have not been retrofitted to identify added ways to reduce risk										
2021 – T LANSING - 007	Salmon Creek at Resilience District	1,2,3, 4,5	Flood, HABs, Severe Storm, Extreme Temperature	<p>Problem: Salmon Creek has poor water quality and has subsequent issue further downstream due to surrounding land use. See action worksheet for more information.</p> <p>Solution To help protect the local residents as well as ecological resources located at the mouth of Salmon Creek, the Town will conduct a feasibility study that will analyze the existing condition of the site, assess magnitude of problems, and provide detailed resiliency measures to mitigate the chronic issues posed by Flooding, HABs, and Severe Storms. See more information on action worksheet.</p>	No	No	24 months	Town of Lansing and Tompkins County Soil & Water Conservation District	750k	Increased water quality	BRIC, NYSDEC, WQIP	High	SIP, NSP, EAP	SP, NR

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
 PDM Pre-Disaster 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



Table 9.13-20. 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
2021 – T LANSING - 001	Salmon Creek Stream Alignment	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2021 – T LANSING - 002	HABs Outreach Plan	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2021 – T LANSING - 003	Living Snow Fence	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021 – T LANSING - 004	Farm Drought Planning	1	1	1	1	0	0	0	1	1	1	0	1	1	1	10	High
2021 – T LANSING - 005	Tree Maintenance	1	1	1	1	0	1	-1	1	1	0	1	1	1	1	10	High
2021 – T LANSING - 006	Repetitive Loss Property Outreach	1	1	1	0	0	0	-1	0	1	0	1	1	1	1	7	Medium
2021 – T LANSING - 007	Salmon Creek at Resilience District	1	1	1	0	1	1	1	1	1	1	1	1	1	1	13	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.13.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.13-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Disease Outbreak										
Drought	004			002	004		002			
Extreme Temperature		007	007	007				007	007	
Flood		007	001; 007	006; 007		006		001; 007	007	
Harmful Algal Bloom		007	007	007				007	007	
Invasive Species										
Ground Failure										
Severe Storm		007	005; 007	007	005			005; 007	007	
Severe Winter Storm		003							003	
Wildfire										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.13.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Lansing followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: The Planning Department. The C.J. Randall represented the community on the Town of Lansing 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.

Additional documentation on the Town of Lansing’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

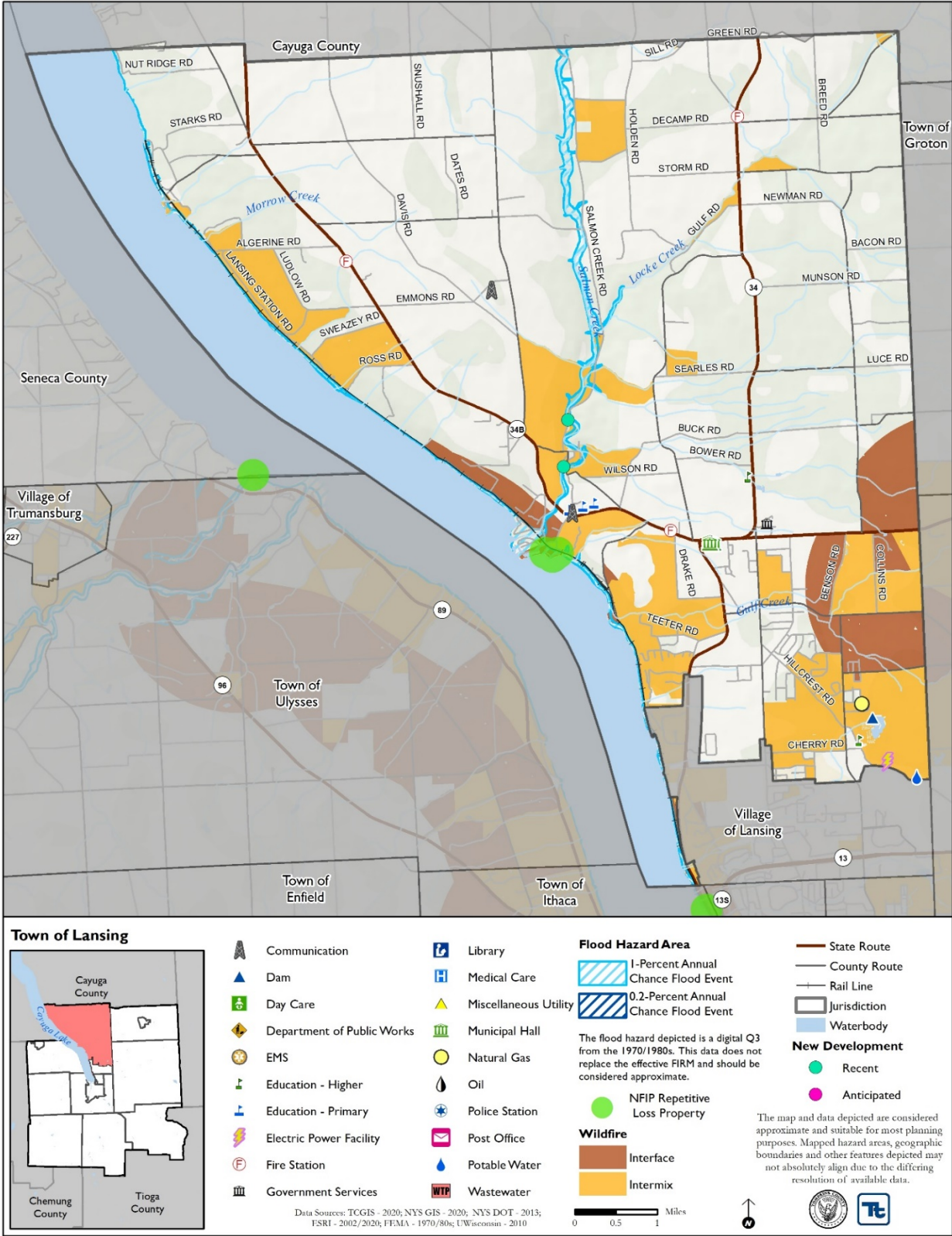


9.13.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Lansing that illustrates the probable areas impacted within the Town of Lansing. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Lansing has significant exposure. The map is provided on the next page.



Figure 9.13-1. Town of Lansing Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Salmon Creek stream realignment		
Project Number:	2021 – T LANSING - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding, impacted roadway right of way and roadway embankment		
Description of the Problem:	<p>Lateral migration of Salmon Creek stream channel, due to blockage of the historic channel, deposition of excessive amounts of sediment and subsequent shifting of the channel alignment. The shifting channel alignment has created a situation where the stream flows 90 degrees perpendicular to the roadway, directly impacting the roadway right of way and roadway embankment.</p> <p>Studies that have been performed: Feasibility Study Stabilization of Salmon Creek, November 2011. Prepared by Barton & Loguidice, P.C. FEMA Seneca HUC8 Risk MAP Watershed Study engineering data models: Salmon Creek Gage Analysis; Salmon Creek Trib. Regression Analysis</p>		
Action or Project Intended for Implementation			
Description of the Solution:	<p>The Town of Lansing, in cooperation with Tompkins County Soil & Water Conservation District, proposes a long-term stabilization strategy include realignment of approximately 1,650 feet of Salmon Creek, a major tributary of Cayuga Lake, extending 110 feet upstream and 550 feet downstream of the current impacted roadbed area. Upstream of the impacted area will focus on establishing stable bankfull cross section geometry and reestablishment of ample floodplain to reduce channel velocity as it approaches the roadway.</p> <p>Reconfiguration of the upstream channel will also provide significant reduction of channel/roadway approach angle by realigning the channel to a flowpath that more gradually parallels Salmon Creek Road. Downstream of the impacted area, reconfiguration of the reach would include construction of stable bankfull cross-section geometry and establishment of active floodplain (bankfull bench) between the stream and the roadway through the area of the roadway that is eroding. The bankfull bench coupled with riprap armoring of the roadway embankment, will provide energy dissipation during high flow events and moves the flood thalweg away from the toe of the embankment slope, thereby reducing sheer stress. The realigned channel will also need cross vanes or other structures to maintain grade control, reduce streambank erosion, maintain channel/floodplain connectivity, and prevent lateral migration of the channel back towards the roadway embankment.</p>		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year storm	Estimated Benefits (losses avoided):	Flood Mitigation
Useful Life:	30 years	Goals Met:	3
Estimated Cost:	\$300,000	Mitigation Action Type:	Natural System Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2020-2021
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	NYSDEC WQIP, FEMA FMA



Responsible Organization:	Town of Lansing and Tompkins County Soil & Water Conservation District	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Conduct a study	Low	Better understanding of problem, but continued issues
	Stream realignment	High	Best alternative
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Salmon Creek stream realignment	
Project Number:	2021 – T LANSING - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project has multiple upstream and downstream benefits to residents, property owners, and the motoring public.
Property Protection	1	Project has multiple upstream and downstream benefits to residents, property owners, and the motoring public.
Cost-Effectiveness	1	Nature-based solutions implemented with existing Town Highway Department in-kind labor and equipment
Technical	1	Designs provided by Tompkins County Soil & Water Conservation District are intended to be long-term stabilization strategy.
Political	1	Town of Lansing is a member of the Cayuga Lake Intermunicipal Organization and supporter of the Community Science Institute
Legal	1	Tompkins County Soil & Water Conservation District has NYSDEC authorization per DEC 7-5032-00272 (General Permit GP-7-19-001), for disturbances to Salmon Creek [NYS Water Index #: Ont-66-12-P 296-57, Class C(TS)] effective 6/25/2020 through 10/01/2023.
Fiscal	0	The Town is seeking grant funding to implement the project.
Environmental	1	Tompkins County Soil & Water Conservation District has NYSDEC authorization per DEC 7-5032-00272 (General Permit GP-7-19-001), for disturbances to Salmon Creek [NYS Water Index #: Ont-66-12-P 296-57, Class C(TS)] effective 6/25/2020 through 10/01/2023.
Social	1	No adverse effects anticipated.
Administrative	1	The Town can manage the project with assistance from Tompkins County Soil & Water Conservation District
Multi-Hazard	1	Addresses multiple hazards
Timeline	1	Timeline is reasonable
Agency Champion	1	Town Highway Department and Tompkins County Soil & Water Conservation District
Other Community Objectives	1	Listed as priority project in Cayuga Lake Watershed Management Plan Restoration & Protection Plan (RPP)
Total		
Priority (High/Med/Low)		



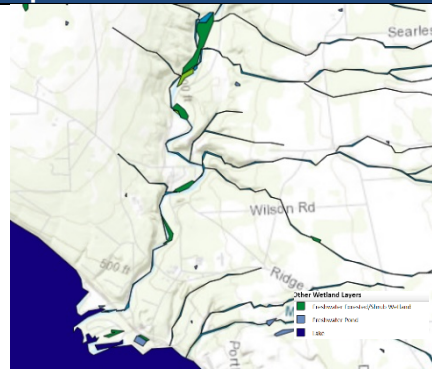
Action Worksheet			
Project Name:	HABs Outreach Plan		
Project Number:	2021 – T LANSING - 002		
Risk / Vulnerability			
Hazard(s) of Concern:	HABs		
Description of the Problem:	HABs continues to be a misunderstood hazard that affects many of the lakefront properties in the Town.		
Action or Project Intended for Implementation			
Description of the Solution:	Work with other partners through the County to clarify the risk and contributing factors and conduct pointed outreach to Town residents for what they can do about it.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500 year storm	Estimated Benefits (losses avoided):	Water quality improvement, tourism benefits.
Useful Life:	5 years	Goals Met:	3
Estimated Cost:	\$30,000	Mitigation Action Type:	
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2021
Estimated Time Required for Project Implementation:	6 months once funding secured	Potential Funding Sources:	NYSDEC WQIP
Responsible Organization:	Town of Lansing and Tompkins County Soil & Water Conservation District	Local Planning Mechanisms to be Used in Implementation if any:	Outreach/ Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Support existing county effort studies	\$5,000	Some improvements and Added Awareness
	Focused effort and outreach	\$30,000	Added action and awareness
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	HABs Outreach Plan	
Project Number:	2021 – T LANSING - 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life and property
Property Protection	1	The project protects life and property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There are no political issues
Legal	1	There are no legal issues
Fiscal	1	The project is technically feasible
Environmental	1	The projects protects the environment
Social	1	This project has a positive social impact
Administrative	1	There are no administrative issues
Multi-Hazard	0	This project only addresses HABS
Timeline	1	The timeline is reasonable
Agency Champion	1	Town Planning
Other Community Objectives	0	None identified thus far
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet	
Project Name:	Salmon Creek at Cayuga Resiliency District
Project Number:	2021 – T LANSING – 007
Risk / Vulnerability	
Hazard(s) of Concern:	Flood, HABs, Severe Storm, Extreme Temperature
Description of the Problem:	<p>Salmon Creek historically has been known to have poorer water quality compared to its surrounding waterbodies. While the reasons for this are multifaceted, the effects of this poor water quality has resulted in cascading effects in Cayuga Lake. The region of Town where Salmon Creek connects to Cayuga Lake is an area that has important ecological resources as well as high value real estate located within the Special Flood Hazard Area. The area is subject to regular hazard disruptions (flooding, HABs, severe storm) that can negatively affect the public health of its residents as well as cause ecological degradation that could harm local wildlife and native species. In 2020, a Harmful Algal Bloom was documented just south of Ladoga Park (noted in red pin at right). This region has also a number of historically documented flood losses.</p> <p>Damages and dangers include, but are not limited to private property damage due to flash flooding (several over the years in Ladoga Park at southern end of region), reduced access to Cayuga Lake due to increased HABs events,, beach closures, road closures due to washouts and damaged stormwater infrastructure, as well as degradation and increased vulnerability of local wetlands and unique natural areas.</p>
Action or Project Intended for Implementation	
Description of the Solution:	<p>This portion of Town includes Salmon Creek, Cayuga Point natural area, Myers Park, the Finger Lakes Marina Park residential community. The majority of this part of located within the Special Flood Hazard Area also has NYSDEC regulated wetlands.</p> <p>To help protect the local residents as well as ecological located at the mouth of Salmon Creek, the Town will feasibility study that will analyze the existing condition of assess magnitude of problems, and provide detailed measures to mitigate the chronic issues posed by HABs, and Severe Storms. Resiliency measures and developed for this area will eventually be piloted to basis for replication and implementation in other regions of the County that experience similar issues.</p> <p>The pilot project will seek to develop a plan for the development of a “resiliency district” that demonstrates various resiliency measures in each area: Ladoga Park, Finger Lakes Marina, Myers Park, Salmon Creek, and Salt Point. Each District will demonstrate and profile a key resiliency action:</p> <ol style="list-style-type: none"> 1) Ladoga Park Resiliency Area - Assess vulnerability of the residential community of former lake front cottages located within the SFHA. Over \$200,000 in flood insurance policy damages have been paid to properties in this area over the years. Work to develop a plan that will include detailed design measures to retrofit any existing residences that have still require updates (elevating above BFE, removing utilities from flood risk areas, exploring joint storage options, others) and pursuing energy district options. NYSEG’s Non-Pipe Alternatives Program has approved NP Environmental’s engineering, design, and specifications to procure a community loop ground source heat pump system for 25 homes in the Ladoga Park community to be



Lake, Salt and Ladoga Town is several resources conduct a the site, resiliency Flooding, projects provide a



- installed at 5 Lake Shore Road. As a part of this plan an educational outreach plan will be develop that will consider signage that explains these upgrades.
- 2) Finger Lakes Marina HABs Resiliency Education – Outline opportunities for permanent HABs reduction measures for local boat recreationalists including “clean boating best practices” and onsite facilities demonstrating practices.
 - 3) Myers Park Recreational Resiliency - Improve and increase capacity of existing public storm infrastructure serving the park area and to reduce runoff and nutrient loading into the lake by developing physical nature-based solutions (bioswales, green ditches, porous pavement, strategic plantings) and develop public educational displays of those practices. Significant precipitation events sometimes limit recreational opportunities in the Park and shores of the lake.
 - 4) Salmon Creek and Minnegar Brook Stream Buffer Protections – Establish and show recommended stream buffer widths for these two streams and pursue smart land use regulations (stream buffer and wetland buffer model protections) that are currently not in place. Recent confirmation of HABs in the region call for consideration of a range of protection options including Town wide buffer ordinances.
 - 5) Salt Point Resiliency Restoration – Further support the great successes of passive parklands being formalized in this region and consider educational display of variety of riparian plantings in this area.



**Salmon Creek
at Cayuga Resiliency District**

This project is multi-phased. The first phase is the development of the feasibility study to decrease flood vulnerability to residents living within the SFHA and to protect the natural resources identified in the area. This is a multi-year plan. The second phase is to implement the proposals/ projects identified within the plan.

Is this project related to a Critical Facility?

Yes

No



Is the critical facility located in the 1% annual chance flood area?		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:	Investments would be made for structures to withstand 100-year flood event	Estimated Benefits (losses avoided):	Identify and strategically reduce risk to flood events and HABs through infrastructure and policy.
Useful Life:	5 years	Goals Met:	1, 2, 3, 5
Estimated Cost:	~\$750,000	Mitigation Action Type:	SIP, NSP, EAP
Plan for Implementation			
Prioritization :	Med	Desired Timeframe for Implementation:	2021-2025
Estimated Time Required for Project Implementation:	24 Months	Potential Funding Sources:	NYSDEC WQIP, FEMA BRIC
Responsible Organization:	Town of Lansing and Tompkins County Soil & Water Conservation District	Local Planning Mechanisms to be Used in Implementation if any:	Land Use Planning, Hazard Mitigation Planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Myers Park retrofits	\$400,000	Reduced flood damages, increase in use of park space, continued risk residential flooding
	Proposed Resiliency District Plan	\$750,000	Increase in flood literacy and understanding of natural measures that can be used to help address regular flooding; Reduced damages due to flooding and further reduced exposure to HABs.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Salmon Creek at Cayuga Resiliency District	
Project Number:	2021 – T LANSING - 007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Would reduce repetitive loss flooding and infrastructure damage
Property Protection	1	Protection of properties in Ladoga Park
Cost-Effectiveness	1	Cost Effective
Technical	0	Requires engineering to ensure success
Political	1	Locally supported
Legal	1	
Fiscal	1	
Environmental	1	Would result in positive environmental improvements
Social	1	Would help support popular community gathering space
Administrative	1	
Multi-Hazard	1	Flooding, HABs, Severe Storm
Timeline	1	Achievable within a few years
Agency Champion	1	Town of Lansing Planning led
Other Community Objectives	1	Economic and recreational destination
Total	13	
Priority (High/Med/Low)	High	



9.14 VILLAGE OF LANSING

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

9.14.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Lansing’s hazard mitigation plan primary and alternate points of contact.

Table 9.14-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael Scott / CEO Address: 2405 North Triphammer Rd Phone Number: 607-257-0424, Ext. 3 Email: codeofficer2@vlansing.org	Name/Title: Don Hartill, Mayor Address: 2405 North Triphammer Rd Phone Number: 607-272-7671 Email: DLH13@Cornell.edu
NFIP Floodplain Administrator	
Name/Title: Michael Scott / CEO Address: 2405 North Triphammer Rd Phone Number: 607-257-0424 Email: codeofficer2@vlansing.org	

9.14.2 Municipal Profile

The Village of Lansing is located within the southern part of the greater Town of Lansing, encompassing about three square miles. The Village of Lansing is mostly residential, being home to The Shops at Ithaca, Tompkins County’s largest mall. The entire village lies within the Cayuga Lake Watershed and is traversed by more than a dozen minor streams. Cayuga Lake dominates the natural environment of the Village and enhances economic and recreational opportunities within the Village. Seven Unique Natural Areas (UNAs) are located within the Village. The Village of Lansing is also home to the Ithaca Tompkins International Airport and the Convenient Care Center, a branch of the Cayuga Lake Medical Center.

In 1971, a group of residents who desired zoning protections from unregulated commercial and high-density residential development brought about the creation of a separate village within Lansing. In 1974, the Village



of Lansing was incorporated. Much of this development is centered around New York State Route 13, which runs to the south of the Village, and Triphammer Road, which intersects through the center of the Village.

The Village of Lansing is governed by a five-person Board of Trustees that includes a Mayor and Deputy Mayor.

According to the 2014-2018 American Community Survey, the population of the Village of Lansing is 3,417.

9.14.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.14-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.14-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.14-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	3	0	2	0	4	0	3	0	6	0
Multi-Family	-	-	-	-	-	-	-	-	13	0
Other (commercial, mixed-use, etc.)	3	0	1	0	-	-	1	0	1	0
Total	6	0	3	0	4	0	4	0	20	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 2014 to Present										
Nissan Dealership	Commercial	1		Uptown Rd		-		Construction on going		
Lansing Meadows	Residential	12units/4 structures		Oakcrest Dr		-		Construction on going		
East Pointe Apartments	Residential	140 units/14 structures		Bomax Dr		-		Completed		
Lansing Trails II	Residential	N/A		Norway Dr		-		Construction ongoing		
Cayuga View	Residential	60 units/1 structure		Cinema Dr		-		Completed		
Dart Drive Stormwater System	Infrastructure	N/A		Dart Dr		-		Completed		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										



Type of Development	2014	2015	2016	2017	2018
Warren Road/Dart Drive Water Line	Infrastructure	N/A	Warren Rd/Dart Dr	-	Future
Dart Drive Street, Sidewalk, and Lighting	Infrastructure	N/A	Dart Dr	-	Future
Beer Multi-Residential Development	Residential	84 units/42 structures	Craft Rd/Bush Lane	-	Future
Solar Home Development	Residential	43 units	Dart Dr/Northwood Rd.	-	Future
Sewer Line Extension	Infrastructure	N/A	Between Village and Town of Lansing	-	Future

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.14.4 Capability Assessment

The Village of Lansing performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.14.4). The Village of Lansing identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.



9.14.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.14-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229), Code of the Village of Lansing, Chapter 62: Electrical Standards, Chapter 75: Fire Prevention and Building Construction	Local and State	Village Code Enforcement Office	Yes
<p><i>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i></p>					
Zoning Code	Yes	Subdivision 3 of §20 of the Municipal Home Rule Law, Code of the Village of Lansing	Local	Village Board of Trustees, Village Planning Board, Village Board of Zoning Appeals	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"¹¹ or "in accordance with a comprehensive plan."¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Code of the Village of Lansing, Chapter 125 Subdivision of Land	Local	Village Board of Trustees	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<p>subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730). <i>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazards.</i></p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70 Code of the Village of Lansing, Chapter 124 Stormwater Management, Erosion and Sediment Control Law	State and Local	Village Board of Trustees	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department.</p>					
Post-Disaster Recovery Plan or Regulation	No		Local		No
<p>Comment:</p>					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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. <i>*The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.</i></p>					
Growth Management Regulation	Yes	Code of the Village of Lansing, Chapter 125 Subdivision of Land	Local	Village Board of Trustees, Village Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a Code of the Village of Lansing, Chapter 125 Subdivision of Land	Local	Village Planning Board	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc. *When the Village updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	NYS DEC and State	Village Planning Board	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	Yes	Code of the Village of Lansing, Chapter 78 Flood Damage Prevention Law	Local	?Board of Trustees, Village Code Enforcement Officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule Code of the Village of Lansing, Chapter 124 Stormwater Management, Erosion and Sediment Control Law, Chapter 80 Illicit Discharges, Activities and Connections to Separate Storm Sewer System Law	Federal, NYS, and Local	NYS DEC, Board of Trustees, Code Enforcement Officer	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	County Dept. of Emergency Response, Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					
Climate Adaptation	Yes	NYS Executive Law, Article 75, Village of Lansing Climate Smart Communities Task Force	Local	Board of Trustees, CSC Task Force	Yes
<p>Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Disaster Recovery Ordinance	No	-	Local	-	No
Comment: *					
Disaster Reconstruction Ordinance	No	-	Local	-	No
Comment: *					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a) Village of Lansing Comprehensive Plan 2015-2025	Local	Board of Trustees and Planning Board	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level. HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	-	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	-	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually. *					
Floodplain or Watershed Plan	No	-	Local	-	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes or No	-	Local	-	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects. *					
Open Space Plan	Yes	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7), Village of Lansing Open Space Protection Plan, Village Greenway Plan	Local	Board of Trustees, Village Greenway Committee	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	Yes	Southern Cayuga Lake Intermunicipal Water Commission – Village of Lansing - Agreement of Municipal Cooperation	Local	Board of Trustees, Southern Cayuga Lake Intermunicipal Water Commission	No
Comment:					
Habitat Conservation Plan	No	-	Local	-	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	-	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Response/Recovery Planning					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Comprehensive Emergency Management Plan	No	NYS Executive Law, Article 2B	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.</p>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
<p>Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.</p>					
Post-Disaster Recovery Plan	No	-	Local	-	No
<p>Comment: *</p>					
Continuity of Operations Plan	No	-	Local	-	No
<p>Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations." *</p>					
Public Health Plan	No	-	Local	-	-
<p>Comment:</p>					
Other: Emergency Response Plan	No	-	Local		No
<p>Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.</p>					
<p>Other: Special Purpose Ordinances (such as critical or sensitive areas)</p>					
<p>Comment:</p>					



Table 9.14-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes; approved by Village Planning Board and issued by Code Enforcement Officer
Permits are tracked by hazard area. For example, floodplain development permits.	Yes, Village Code Enforcement Officer
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, Village Code Enforcement Officer

9.14.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Lansing.

Table 9.14-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	Village Greenway Committee
Economic Development Commission/Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance programs to reduce risk	Yes	Department of Public Works
Mutual aid agreements	Yes	Agreements with Town of Lansing and Village of Cayuga Heights
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	Yes	Part-time 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	Village Code Enforcement Officer
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Village Code Enforcement Officer
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-



9.14.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Lansing.

Table 9.14-6. Fiscal Capabilities

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

9.14.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Lansing.

Table 9.14-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes, trustee developed and maintains website
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Village listserv
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No

9.14.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Lansing.



Table 9.14-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NA	NA
Building Code Effectiveness Grading Schedule (BCEGS)	No	NA	NA
Public Protection (ISO Fire Protection Classes 1 to 10)	No	NA	NA
NYSDEC Climate Smart Community	Yes	Member, early stage	NA
Storm Ready Certification	No	NA	NA
Firewise Communities classification	No	NA	NA

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.14.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.14-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	Medium
Severe Winter Storm	High

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating

9.14.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Michael Scott, Code Enforcement Officer also serves as the FPA.



Table 9.14-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation? How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	Yes
How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction?	-
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	0
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
Resources	
What local department is responsible for floodplain management?	COE
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
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)	-
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	By definition identified in law.
What are the barriers to running an effective NFIP program in the community, if any?	Record keeping
Compliance History	
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)?	06/18/08
Regulatory	



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?	-
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	-
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 – local law for Conservation Combining District
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	No

9.14.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Lansing.

Table 9.14-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Village of Lansing	7	5	\$6,588.85	0	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss

9.14.4.9 Additional Areas of Existing Integration

Regulations in the Village of Lansing currently integrate mitigation measures into its zoning code. Specifically, the Village has both a Conservation Combining District and a Flood Hazard Combining District which directs development away from waterways and natural features. These regulations have helped to shape several development projects over the last decade. Lessons learned from the use of these tools can be shared with other jurisdictions.

The Village of Lansing will look to further integrate its Comprehensive Plan and local policies with mitigation measures and also update Comprehensive Plan with the information gathered as a part of this mitigation plan update.



9.14.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Village relies on the State Highways 13 and 34 for evacuation. Evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Village will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP.

Sheltering

The following is a currently established shelter in the Village of Lansing. In the event that sheltering is needed shelters will be determined at the time of an emergency, in accordance with the County CEMP.

Table 9.14-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Ithaca & Tompkins County YMCA	50 Graham Road West, Ithaca, NY	2000/450	-	-	-	-	-

Temporary Housing

The following are potential temporary housing locations in the Village.

Table 9.14-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Econo Lodge	2303 N. Triphammer	Water, electric, sewer,	72 rooms	Hotel	Install sprinkler system
Homewood Suites	36 Cinema Drive	Water, electric, sewer	91 rooms	Hotel	-
Marriott Courtyard	29 Thornwood Drive	Water, electric, sewer	101 rooms	Hotel	-



Clarion Inn	2310 N. Triphammer	Water, electric, sewer	121 rooms	Hotel	-
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The Village has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the Village will work with the County to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Permanent Housing

Locations for future locations for permanent housing in the Village are identified on the Village Zoning Map.

Table 9.14-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Permanent housing locations located in the Village are noted through zoning and comprehensive plan vacant land. In addition, the countywide buildable land analysis presented in Section 4 (County Profile) can be utilized to identify potential locations.					

9.14.5 Hazard Event History Specific to the Village of Lansing

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Lansing’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.14-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.



Table 9.14-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding	-	Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
June 14-15, 2015	Heavy Rain and Flash Flood	-	A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	While this event impacted the community, due to lack of resources damage history has not been documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	While this event impacted the community, due to lack of resources damage history has not been documented.
July 24, 2017	Heavy Rain and Flash Flooding	-	Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	While this event impacted the community, due to lack of resources damage history has not been documented.
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	-	While this event impacted the community, due to lack of resources damage history has not been documented.

Notes:

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



9.14.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Village of Lansing's risk assessment results and data used to determine the hazard ranking.

9.14.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

There are no Village critical facilities located in flood prone areas.

9.14.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, the Village of Lansing 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 Lansing. The Village of Lansing has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Lansing indicated the following:

- Flood and severe storm remain as the greatest concern and outside assistance is needed to help guide appropriate actions for reducing risk.
- The Village concurs with the hazard rankings identified in the broader plan.

Table 9.14-16. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.14.6.3 Identified Issues

The Village of Lansing has identified the following vulnerabilities within their community:

- Village has large concentrations of vulnerable populations of elderly and disabled residents and Village lacks the plan to assist this group in time of emergency.

9.14.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.14.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.14-17. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1) Project to be included in 2021 HMP or Discontinue 2) If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3) If discontinue, explain why.
						Cost	Level of Protection	
VL1		Multi-Hazard	Village of Lansing	Inventory business park and hazard risks, and implement retrofits as appropriate	No Progress	-	-	Consider adding as new action.
VL2		Lake Flood, Flash Flood	Bolton Point	Evaluate the intake area/building for Bolton Point since that is located in the flood area for the Village of Lansing and determine the impact if flooded	In Progress	-	-	Discuss with Bolton Point and consider adding as new plan action.
VL3		Landslide, Water Contamination	Bolton Point	Assess the main raw water intake line for Bolton Point to determine if there needs to be additional measures implemented in the event that the current trunk line fails	In Progress	-	-	Discuss with Bolton Point and consider adding as new plan action.



9.14.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Lansing has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- A series of redundancy upgrades have been made to Bolton Point (water purveyor in village which supplies multiple municipalities in the County).

9.14.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Lansing participated in a mitigation action workshop in October 2020 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: e.g., 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).

Table 9.14-18 summarizes the comprehensive range of specific mitigation initiatives the Village of Lansing would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.14-18 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.14-18. 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
2021 – V LANSING – 001	Flash Flood Mitigation	1,3,4	Flood	<p>Problem: The Village experiences increasing, intermittent flash flood events and subsequent property and infrastructure damages. This leads to road closures, damages, and emergency rescues.</p> <p>Solution: The Village DPW staff will survey and identify Village trees that pose a threat to the power and communication infrastructure. The municipality will develop a tree maintenance program that will include routine inspections of trees located in the municipal right-of-way. During the inspection, the municipality will identify trees that are in need of trimming or removal. Once identified, a schedule of maintenance and/or removal will be developed, and the municipality will begin work. This will help reduce tree damage, road closures, utility outages, and reduce/eliminate damage to structures and infrastructure.</p>	No	No	5 Years	Village Board of Trustees Village Engineering Village DPW	\$100,000	Unknown	FEMA BRIC, HMGP, DEC WQIP	High	SIP	PP
2021 – V LANSING - 002	Tree Threat Reduction Program	3,4	Severe Storm, Severe Winter Storm	<p>Problem: The Village experiences intermittent severe storm and winter storm events that threaten the Village’s power and communication infrastructure</p> <p>Solution: The Village DPW staff will survey and identify Village trees that pose a threat to the</p>	No	No	2 Years	Village Board of Trustees Village Dept. of Public Works	\$50,000	Unknown	DEC Tree Inventory, FEMA HMGP	High	NSP	PP, NR



Table 9.14-18. 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
				power and communication infrastructure										
2021 – V LANSING - 003	Emergency Lifelines and Mobility Plan	4,5	All Hazards	<p>Problem: The Village has large concentrations of vulnerable populations of elderly and disabled residents. Should catastrophic emergency occur all residents, including the elderly and disabled residents, would need emergency routes for support and mobility</p> <p>Solution: The Village government would compile a committee of local residents and staff to identify the local, county, state, and federal requirements for emergency routes, shelters, food, water, clothing and emergency care. A Village response plan would be created, vetted, and authorized for implementation and communication to the Village businesses and residents.</p>	No	No	3 Years	Village Board of Trustees Village Dept. of Public Works	\$25,000	Unknown	FEMA BRIC, Local Resources, Social Service Program Funding	High	LPR	ES

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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant Program
- PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:



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


BRIC Building Resilient Infrastructure and Communities Program

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



Table 9.14-19. 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
2021 – V LANSING – 001	Flash Flood Mitigation	1	1	1	1	1	1	-1	1	1	-1	1	1	1	1	12	High
2021 – V LANSING – 002	Tree Threat Reduction Program	1	1	1	1	1	1	-1	0	1	-1	1	1	1	1	11	High
2021 – V LANSING – 003	Emergency Lifelines and Mobility Plan	1	0	1	1	1	1	-1	0	0	-1	1	1	1	1	9	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.14.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.14-20. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Disease Outbreak	003									003
Drought	003									003
Extreme Temperature	003									003
Harmful Algal Bloom	003									003
Invasive Species	003									003
Flood	003	001				001				003
Severe Storm	003		002			002		002		003
Severe Winter Storm	003		002			002		002		003

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.14.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Lansing followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: The Village Trustees and Code Enforcement. Don Hartill, Ronny Hardaway, and Michael Scott represented the community on the Village of Lansing 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.

Additional documentation on the Village of Lansing’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

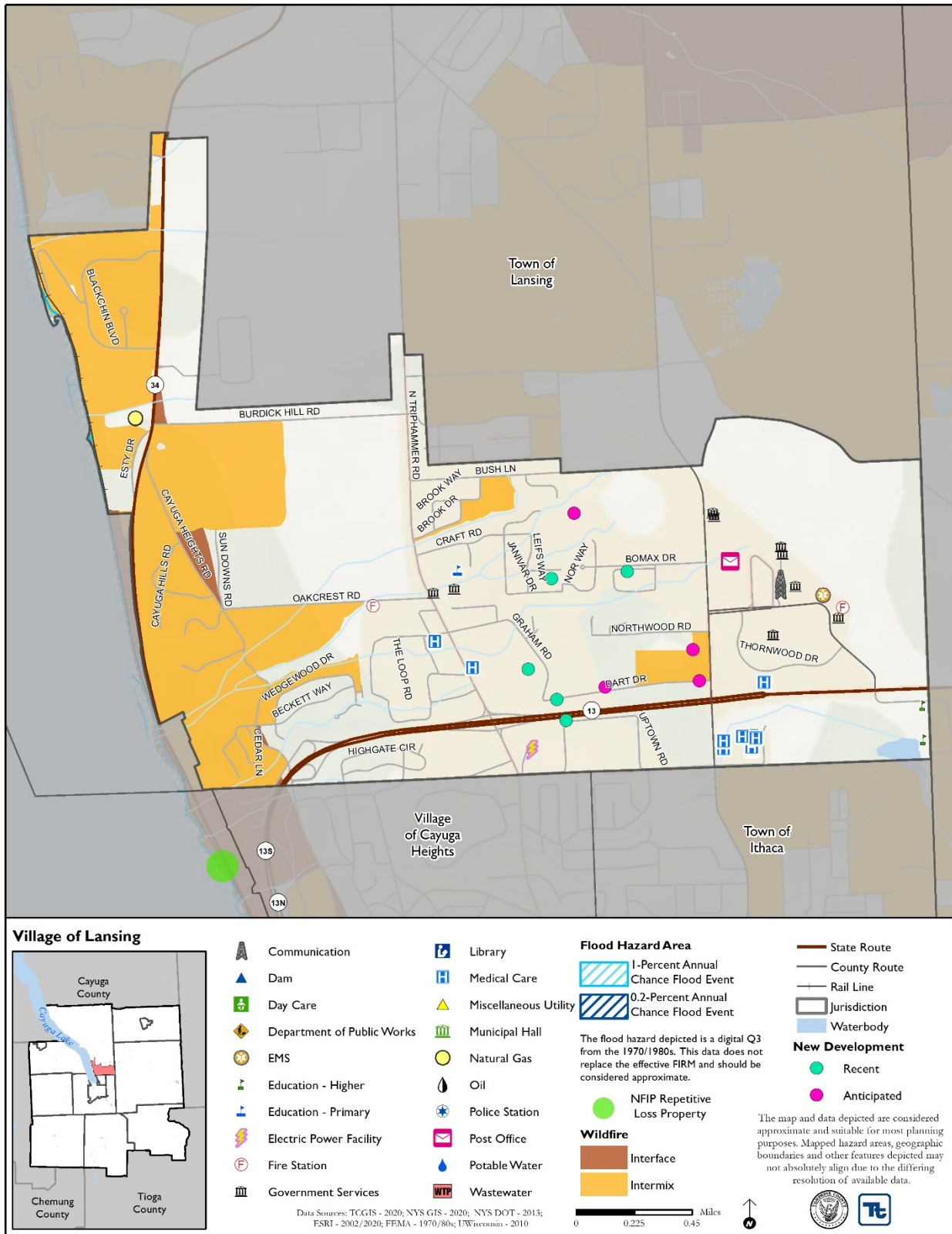


9.14.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Lansing that illustrates the probable areas impacted within the Village of Lansing. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Lansing has significant exposure. The map is provided on the next page.



Figure 9.14-1. Village of Lansing Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Flash Flood Mitigation		
Project Number:	2021- V LANSING - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flash flooding		
Description of the Problem:	The Village experiences increasing, intermittent flash flood events and subsequent property and infrastructure damages. This leads to road closures, damages, and emergency rescues. The Village's topography drains flash-flood water from the East westward to Cayuga Lake. With new development projects within and around the Village, impervious surfaces have increased; thereby, worsening the flash-flood-related damages and dangers.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village DPW staff will survey and identify Village trees that pose a threat to the power and communication infrastructure. The municipality will develop a tree maintenance program that will include routine inspections of trees located in the municipal right-of-way. During the inspection, the municipality will identify trees that are in need of trimming or removal. Once identified, a schedule of maintenance and/or removal will be developed, and the municipality will begin work. This will help reduce tree damage, road closures, utility outages, and reduce/eliminate damage to structures and infrastructure.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	-	Estimated Benefits (losses avoided):	Reduction in road closures and emergency rescues.
Useful Life:	-	Goals Met:	1
Estimated Cost:	\$100,000.00	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	One Year
Estimated Time Required for Project Implementation:	One Year	Potential Funding Sources:	FEMA BRIC, HMGP, DEC WQIP, Village Operating Budget
Responsible Organization:	Village Board of Trustees Village Engineering Village DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Supports Greenway Plan, CSC, Cayuga Lake Watershed
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Critical failures only	\$50,000.00	Non-critical failures continue
	Engineered Study evaluating investments	\$100,000	Reduced flooding concerns
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
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Action Worksheet		
Project Name:	Flash Flood Mitigation	
Project Number:	2021- V LANSING - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Will increase safety of residents and DPW crew
Property Protection	1	Potential for significant property and infrastructure damage reduction
Cost-Effectiveness	1	Long-term benefits will outweigh short-term costs
Technical	1	Project is technically feasible
Political	1	Businesses and residents have requested and support this action
Legal	1	Village has legal authority to enact the project
Fiscal	-1	Additional budgeting might be necessary
Environmental	1	Impact to local and downstream environment could be major
Social	1	Project might disrupt businesses and neighborhoods
Administrative	-1	Staff will need contracted work to study and implement
Multi-Hazard	1	Flood damage can escalate and expand to other risks
Timeline	1	Project can be completed in less than 5 years
Agency Champion	1	Village boards and committees are champions
Other Community Objectives	1	Supports Greenway Plan, CSC, Cayuga Lake Watershed
Total	13	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Tree Threat Reduction Program		
Project Number:	2021- V LANSING - 002		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm		
Description of the Problem:	The Village experiences intermittent severe storm and winter storm events that threaten the Village's power and communication infrastructure. There are several high-voltage power lines, many above-ground power and communication lines running through the Village. There are mature trees throughout the Village that could threaten these power and communication lines in severe storm high winds or wind bursts, or during severe, winter storm snow and ice events.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village DPW staff will survey and identify Village trees that pose a threat to the power and communication infrastructure. Once the trees have been identified, the DPW crew, supplemented by tree maintenance contractors, will remove the limbs and/or trees that threaten the power and communication infrastructure.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	-	Estimated Benefits (losses avoided):	Reduced interruption of power, reduced road closures, increased continuity of operations.
Useful Life:	-	Goals Met:	1,4
Estimated Cost:	\$50,000.00	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	One Year
Estimated Time Required for Project Implementation:	One Year	Potential Funding Sources:	Operating Budget, DEC Tree Inventory, FEMA HMGP
Responsible Organization:	Village Board of Trustees Village Dept. of Public Works	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current threats continue
	Partial tree/limb removal	\$25,000.00	Non-critical threats continue
	Tree planning and maintenance	\$50,000	Removal of critical threats
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Tree Threat Reduction Program	
Project Number:	2021- V LANSING - 002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Potential for DPW staff and residents' lives to be endangered
Property Protection	1	Reduction of significant property and infrastructure damage
Cost-Effectiveness	1	Proactive costs greatly reduce reactive costs
Technical	1	Project is technically feasible
Political	1	Businesses and residents have requested and support this action
Legal	1	Village has legal authority to enact the project
Fiscal	-1	Additional budgeting might be necessary
Environmental	0	
Social	1	Project might disrupt businesses and neighborhoods
Administrative	-1	Staff will need contracted work to implement tree/limb removal
Multi-Hazard	1	Sever Storm Hazard and Winter Storm Hazard
Timeline	1	Project can be completed in less than 5 years
Agency Champion	1	Village boards and committees are champions
Other Community Objectives	1	Supports Greenway Plan and CSC program
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Emergency Lifelines and Mobility Plan		
Project Number:	2021- V LANSING - 003		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Village has large concentrations of vulnerable populations of elderly and disabled residents. Should catastrophic emergency occur all residents, including the elderly and disabled residents, would need emergency routes for support and mobility. The residents would also need ADA-accessible shelters along with food, water, clothing, and emergency care.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village government would compile a committee of local residents and staff to identify the local, county, state, and federal requirements for emergency routes, shelters, food, water, clothing and emergency care. A Village response plan would be created, vetted, and authorized for implementation and communication to the Village businesses and residents.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input 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)			
Level of Protection:	-	Estimated Benefits (losses avoided):	-
Useful Life:	-	Goals Met:	4,5
Estimated Cost:	\$25,000.00	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	-
Estimated Time Required for Project Implementation:	-	Potential Funding Sources:	FEMA BRIC, Local Resources
Responsible Organization:	Village Board of Trustees Village Dept. of Public Works	Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Failure to adequately address emergency access and needs
	Emergency routes identified	\$5,000.00	Failure to adequately address emergency needs
	Emergency resources established	\$20,000	Failure to adequately address emergency mobility
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Emergency Lifelines and Mobility Plan	
Project Number:	2021- V LANSING - 003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Increased effectiveness of safety and survival
Property Protection	0	-
Cost-Effectiveness	1	Safety and survival of residents will outweigh project costs
Technical	1	Project is technically feasible
Political	1	Businesses and residents have requested and support this action
Legal	1	Village has legal authority to enact the project
Fiscal	-1	Additional budgeting might be necessary
Environmental	0	-
Social	0	-
Administrative	-1	Outside administrative support might be needed
Multi-Hazard	1	Applies to many hazards
Timeline	1	Project can be completed in less than 5 years
Agency Champion	1	Village boards and committees are champions
Other Community Objectives	1	Supports Tompkins County Hazard Mitigation objectives
Total	10	
Priority (High/Med/Low)	High	



9.15 Town of Newfield

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

9.15.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Newfield’s hazard mitigation plan primary and alternate points of contact.

Table 9.15-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Michael Allinger, Supervisor 166 Main St., Newfield, NY 14867 607-564-3669 supervisor@newfieldny.org	Christine Laughlin, Deputy Supervisor 166 Main St., Newfield, NY 14867 607-564-9953 claughlin@newfieldny.org
NFIP Floodplain Administrator Alan Teeter, Code Officer 166 Main St., Newfield, NY 14867 607-327-1849 codeofficer@newfieldny.org	

9.15.2 Municipal Profile

The Town of Newfield is located in the southwest corner of Tompkins County, bordered by the Town of Enfield and Ithaca to the north, and Danby to the east. Newfield is the most forested of the Towns in Tompkins County, home to the Connecticut Hill State Wildlife Management Area, Cliffside State Forest, Arnot Teaching and Research Forest, and Newfield State Forest. The Town of Newfield is home to the only covered bridge in Tompkins County, and the oldest covered bridge in New York State still in use, built in 1853. The Covered Bridge was listed on the National Register of Historic Places in 2000.

The Newfield area was settled by British pioneers around 1800, and shortly after established the Village of Florence. Florence was part of the Town of Spencer in Tioga County until 1811 when it separated from Spencer and renamed Cayuta. In 1822, it was transferred into Tompkins County and renamed Newfield. Agriculture



was the main industry, and farmers sold wheat, corn, and milk to nearby Ithaca through the 1850s. However, soil exhaustion from over farming, interstate competition, and Civil War losses, led to farm abandonment and population losses until the 20th century. During the Great Depression, the federal and state government bought thousands of acres of abandoned farmland in Newfield for conservation and reforestation, creating the Newfield State Forest and Tompkins County Forest. Farming is the Town’s main industry, although it has declined in recent years.

Newfield is governed by a Town Board comprised of four elected At-Large members, and an elected Town Supervisor. Elections are held bi-annually, with officials being elected on rotating four-year terms.

9.15.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.15-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.15-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

According to the 2014-2018 American Community Survey, the population for the Town of Newfield is 5,218.

Table 9.15-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	20	N/A	19	N/A	10	N/A	11	N/A	17	N/A
Multi-Family	1	N/A	1	N/A	1	N/A	0	N/A	0	N/A
Other (commercial, mixed-use, etc.)	1	N/A	1	N/A	2	N/A	6	N/A	1	N/A
Total	22	N/A	21	N/A	13	N/A	17	N/A	18	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 2014 to Present										
None	-	-	-	-	-	-	-	-	-	-



Type of Development	2014	2015	2016	2017	2018
None	-	-	-	-	-
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None	-	-	-	-	-
None	-	-	-	-	-

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

**Not recorded

9.15.4 Capability Assessment

The Town of Newfield performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.15.4). The Town of Newfield identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review and the answers to integration survey questions.

9.15.4.1 Planning, Legal, and Regulatory Capability

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



Table 9.15-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
<p>Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</p>					
Zoning Code	No	-	Local	None	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"11 or "in accordance with a comprehensive plan."12 Unless the Town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	No	-	Local	None	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*Subdivision Law is pending and in progress, still needing a public hearing and vote. When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Local code officer/supervisor	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	-	Local	-	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<p>Comment: 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> <p>*The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.</p>					
Growth Management Regulation	No	-	Local	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primary tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</p> <p>*Site Plan Review Law passed in the Town of Newfield in 2017. *When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	None	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	No	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRA)	Local, State, Federal	None	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <p>*The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	None	Yes
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>					
Climate Adaptation	No	NYS Executive Law, Article 75	Local	None	Yes
<p>Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</p> <p>Climate Smart Community will soon be addressed by the Town board with plans of accepting a modified pledge.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Disaster Recovery Ordinance	No	-	Local	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	Local	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a)	Local	Local planning and town boards	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level</p> <p>*The Town of Newfield passed a Comprehensive Plan in 2013. *When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	-	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	Local	-	No
<p>Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.</p>					
Floodplain or Watershed Plan	No	-	Local	-	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes	-	Local	Local code officer	No
<p>Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.</p> <p>*The Town contracts with Tompkins county soil and water for inspections and recommendations.</p>					
Open Space Plan	No	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)	Local	-	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Urban Water Management Plan	No	-	Local	?	No
Comment:					
Habitat Conservation Plan	No	-	Local	?	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No				No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	-	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan		NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
The Town of Newfield is planning to update the Emergency mgmt. plan. When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	?
Comment:					
Other: Emergency Response Plan	No	-	Local		No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas) No					
Comment:					

Table 9.15-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, local planning board and code officer
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No, there are many open spaces/buildable land in Newfield, mostly farms that are no longer operational.



9.15.4.2 Administrative and Technical Capability

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

Table 9.15-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Town Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (mass notification system, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Local highway department and volunteer fire department
Technical/Staffing Capability		
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	-
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other	No	-

9.15.4.3 Fiscal Capability

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



Table 9.15-6. 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	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	No

9.15.4.4 Education and Outreach Capability

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

Table 9.15-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes, The Town has social media (Facebook and website) but does not use related to hazard mitigation.
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	Yes, 411 and SWIFT 911 from Tompkins County
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes, Newfield Central School has its own plans
Other	-

9.15.4.5 Community Classifications

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



Table 9.15-8. 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	Local Volunteer Fire Department participates	
NYSDEC Climate Smart Community	Yes	-	2021
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.15.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

- Does the Town of Newfield have access to resources to determine the possible impacts of climate change upon the Town of Newfield? No, however the Town is interested in increasing resources to address climate change related issues.
- Is the administrative supportive of integrating climate change in policies or actions? Yes, the Town does support integrating climate change into their plans and policies, given that they have positive impacts on the local economy and increase the overall wellbeing and quality of life for Newfield residents.
- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the Town of Newfield? Yes, climate change is discussed in multiple municipal policies/documents.

Table 9.15-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	High
Drought	High
Extreme Temperature	Medium



Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High Capacity exists and is in use

Medium Capacity may exist; but is not used or could use some improvement

Low Capacity does not exist or could use substantial improvement

Unsure Not enough information is known to assign a rating

9.15.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Alan Teeter, Code Officer
166 Main St., Newfield, NY 14867
607-327-1849
codeofficer@newfieldny.org

Table 9.15-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. Do you maintain a list of properties that have been damaged by flooding?	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? How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction?	The Town does not make determinations of substantial damage to private properties
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes



NFIP Topic	Comments
If not, state why.	
Resources	
What local department is responsible for floodplain management?	No 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
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?	Potential interest in increased training.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Services provided through county
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Site Plan Review
What are the barriers to running an effective NFIP program in the community, if any?	Inadequate knowledge about program
Compliance History	
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)?	3/17/1997
Regulatory	
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, section 13 (1985)
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Yes
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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	No but interested in participating.



9.15.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.15-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Town of Newfield	9	6	\$52,254.13	1	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss

9.15.4.9 Additional Areas of Existing Integration

Regional Senior Service - The use of Personal Emergency Response Systems (PERS) Alarms that are monitored on a 24/7 basis is often lifesaving and their cost is minimal. There is a PERS program through the Tompkins County Office of the Aging and several private alarm companies offer similar services.

Police - As of January 2013, there is a police sub stations in Newfield, made up of the Tompkins County Sheriff’s Department and the New York State Police

Fire - The Newfield Fire Company is an all-volunteer company that depends on members of the community to provide fire protection and Emergency Medical Services (EMS) to the residents of the Town of Newfield, and surrounding Tompkins County.1 It was formed on March 17, 1917, and in 1982, the company moved to its current site at 77 Main Street.

Emergency Management - Tompkins County is part of the State Emergency Management System. Every member of the Newfield Fire Department, Newfield Town Board, Town Clerk’s Office, and Town staff should be required to attend National and State training in Emergency Management.

9.15.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Route

The Town of Newfield does not have any officially designated evacuation routes but consider NYS 13N, NYS 13S, Shaffer Rd or NYS 34/96 EW to be the main roads used for evacuation during a hazard event. However, these roads have not officially been recognized as evacuation routes and are not in any official document.



Evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Town will identify evacuation routes according to procedures outlined in the ESF16 annex of the Tompkins County 2021 CEMP,

Sheltering

The Newfield Central School is considered the main shelter for the Town of Newfield as it is one of the only facilities with backup power.

Table 9.15-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Newfield Central School	247 Main St	Unsure	No	Yes	Yes	No	-

Temporary Housing

This section provides information on temporary housing locations.

Table 9.15-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Newfield Town Athletic Park	VanKirk Rd	Water, Electric	Unsure	Open fields	No buildings present

Permanent Housing

While the Town did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Town can utilize this analysis to identify potential locations.

Table 9.15-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire
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					Prevention and Building Code
Please refer to Section 4 (County Profile).					

9.15.5 Hazard Event History Specific to the Town of Newfield

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Newfield’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.15-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.15-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	The Town was impacted but did not report any damages.
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had	The Town was impacted. Damage to culvert pipes, several ditches, roads, and bridges including a historical stone bridge. Also, personal property damage.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			approximately \$1.5 million in damages from this event.	
February 14-15, 2016	Winter Storm Flooding		Winter storm related flooding	-
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	The Town highway personal worked many overtime hours. The Town had no claims.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	None identified.
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		No claims by the Town

Notes:

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

9.15.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Newfield’s risk assessment results and data used to determine the hazard ranking.

9.15.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year flood event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The Town of Newfield does not have any critical facilities located in a 1% or 0.2% chance flood zone, according to FEMA HAZUS, which estimates the damage and loss due to municipality’s identified hazards of concern.

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No facilities identified				

9.15.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins as a whole. Therefore, each Town of Newfield 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 Newfield. The Town of Newfield has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Newfield concurred with the calculate rankings.

Table 9.15-16. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Harmful Algal Bloom	Low
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	High
Severe Winter Storm	Medium



Hazard	Ranking
Wildfire	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

9.15.6.3 Identified Issues

The Town of Newfield has identified the following vulnerabilities within their community:

- Flooding and severe storms (thunderstorms) are a significant issue for the Town.
- There is a significant concern for individuals who live in the rural parts of the Town as many roads are narrow and poorly paved, making it difficult for emergency medical services to access the residents in times of need.

Specific areas of concern based on resident response to the Town of Newfield Hazard Mitigation Citizen survey include:

- Road flooding is a significant concern for the Town of Newfield.
- Road maintenance is inadequate thus leading to drainage issues.

9.15.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.15.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.15-17. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
N1		Flash Flood	Town of Newfield Highway	Develop long term mitigation plans for Main Street Culvert	IN PROCESS ONGOING	Cost	\$880,000	Summer of 2020, the Main Street Culvert Pipe will be upgraded with an insert, headwalls improved and road resurfaced. Estimated cost to be \$880,000
						Level of Protection		
						Damages Avoided; Evidence of Success		
N2		Flash Flood 6/2015	Town of Newfield Highway	Retrofit culvert on Douglas Road for added resilience	COMPLETE 2016	Cost	\$171,000	Complete
						Level of Protection	High	
						Damages Avoided; Evidence of Success	Flood	
NEW		Flash Flood 6/2015	Town of Newfield Highway	Retrofit culvert on Bower Road for added resilience	COMPLETE 2015	Cost	\$66,000	Complete
						Level of Protection	High	
						Damages Avoided; Evidence of Success	Flood	
NEW		Flash Flood 6/2015	Town of Newfield Highway	Retrofit culvert on Connecticut Hill Road and repairs from flood damages	COMPLETE 2016	Cost	\$60,000	Complete
						Level of Protection	High	
						Damages Avoided; Evidence of Success	Flood	
NEW		Flash Flood 6/2015	Town of Newfield Highway	Repairs to Carter Creek, repairs to head wall and stream rebuilding	COMPLETE 2017	Cost	\$84,500	Complete
						Level of Protection	High	
						Damages Avoided;	Flood	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success		
NEW		Flash Flood 6/2015	Town of Newfield	Repairs to historical stone bridge	COMPLETE 2018	Evidence of Success		Complete
						Cost	\$188,000	
						Level of Protection	High	
NEW		Erosion	Town of Newfield Highway	Upgrade to Fishkill Rd Culvert, new headwalls	COMPLETE 2018	Damages Avoided; Evidence of Success	Flood	Complete
						Cost	\$130,000	
						Level of Protection	High	
NEW		Erosion	Town of Newfield Highway	Upgrade to Jackson Hollow Road culvert.	COMPLETE 2019	Damages Avoided; Evidence of Success	Flood	Complete
						Cost	\$95,000	
						Level of Protection	High	



9.15.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Newfield has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- All actions identified above.

9.15.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Newfield participated in a mitigation action workshop in 2020 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).

Table 9.15-18 summarizes the comprehensive range of specific mitigation initiatives the Town of Newfield would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.15-19 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.15-18. 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
2021-T NEWFIELD-001	Develop Resilient Communications System	1,5	All Hazards	<p>Problem: Lack of adequate broadband throughout the Town (particularly beyond hamlet) limiting residents' availability to medical care, communications, education and remote workforce.</p> <p>Solution: Work with Spectrum and other entities to install high speed broadband (100 mbps or better) throughout the Town. Initial inventory of housing units without broadband will need to be conducted, before the planning process can begin. Once the inventory is finalized, the town would need to work with the County, and Spectrum to develop a plan to increase capacity in the region.</p>	No	No	Medium	Town Board/ Spectrum	Medium	High	The New NY Broadband Program, Municipal Budget, Climate Smart Communities	High	SIP	SP
2021-T NEWFIELD-002	West Branch Caygua Inlet and Pony Hollow Creek Mitigations	1,3	Flood	<p>Problem: Overflowing Inlet during heavy rain, structures flooded causing personal property damage to multiple properties.</p> <p>Solution: Conduct stream assessment to determine best first steps to reduce flooding and erosion. Proposed steps include widening of stream at bridge</p>	No	No	Long	Town Board / SWCD	High	High	FMA, HMGP, NRCS Emergency Watershed Protection (EWP) program	High	SIP	SP



Table 9.15-18. 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
				junctures, developing solid riparian buffers, along the stream, and creating flood control structures that can help redirect the flow of water. Flood mitigation options for structures in floodplains and stream corridor areas should also be explored including retrofits and potentially buyouts.										
2021-T NEWFIELD- 003	Shelter Valley Residents	1,4	Flood	<p>Problem: Overflowing creek, history of flooding during heavy rain, basements and first floor filling up causing personal property damage. During the June 2015 heavy flows from Benjamin Hill carving out landslides along Depot Road carrying debris downstream to Shelter Valley resulting in first floor flooding throughout the Shelter Valley neighborhood.</p> <p>Solution: Streambank stabilization of the West Branch of the Cayuga Lake Inlet will be needed. Work with the Soil and Water Conservation District to develop engineering plan to stabilize banks and mitigate overflow of creek/ flooding of properties. In addition,</p>	No	No	Long	Town Board and EMS	High	High	FMA, HMA, BRIC CDGB	High	SIP	SP



Table 9.15-18. 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
				conduct outreach to neighborhood residents and provide potential mitigation and retrofitting solutions to mitigate future flood damage.										
2021-T NEWFIELD-004	VanBuskirk Gulf Residents Flood Mitigation Initiative	1,3	Flood/ Severe Storms	<p>Problem: Overflowing creek, history of flooding during heavy rain, basements filling up causing personal property damage during the June 2015 flood. Culvert needed to be replaced on Stone Jug Road. Flow of the creeks course was altered by 4" per hour rains carrying debris downstream where it jammed up the culvert effectively washing out the culvert.</p> <p>Solution: Replace culvert and conduct rightsizing to mitigate future washout. In addition, Work with the town DPW and the SWCD to conduct additional assessment on additional structural reinforcement measures and flood control barriers to reduce washout in the future and prevent overflow. The culvert installation would be phase 1 of the entire project.</p>	No	No	Medium	Town DPW and SWCD	Low	High	Municipal Budget	High	EAP	PR



Table 9.15-18. 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
2021-T NEWFIELD-005	Sewer Study	1,5	Flood/ Severe Storms	<p>Problem: Increased wastewater inflow during heavy rains causes backup and overflow of existing treatment facilities. With projected precipitation, this is likely to worsen so a solution will need to be developed.</p> <p>Solution: Conduct a study of water inflow and out flow, leak testing and increase of the leech reduce backup and overflow. This will require a hiring of an engineering firm as well as the collaboration with the Town public works. The second phase would be to implement to solutions developed by the firm. This will be a preliminary study from which technical proposals will be developed. Affiliated municipal officials that rely on this system would need to be stakeholders for this project.</p>	Yes	No	Medium	Town DPW	High	High	FMA, NYSDEC Environmental Protection & Improvement Grants and Clean Water Act Section 604(b) Water Quality Planning Grants	High	SIP	SP

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
 PDM Pre-Disaster Mitigation Grant Program
 BRIC Building Resilient Infrastructure and Communities

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





Table 9.15-19. 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	Total	High / Medium / Low
2021-T NEWFIELD-001	Develop Resilient Communications System	1	1	1	1	0	0	-1	1	1	1	1	1	1	1	10	High
2021-T NEWFIELD-002	W. Branch Cayuga Inlet Clearing and Pony Hollow Creek Mitigations	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-T NEWFIELD-003	Shelter Valley Residents	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T NEWFIELD-004	VanBuskirk Gulf Residents Flood Mitigation Initiative	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T NEWFIELD-005	Sewer Study	1	1	1	0	1	1	-1	1	1	1	1	1	1	1	11	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.15.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.15-20. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak		001							001	
Drought		001							001	
Extreme Temperature		001							001	
Flood		001; 002; 003; 005		004	004				001; 002; 003; 005	
Harmful Algal Bloom		001							001	
Invasive Species		001							001	
Ground Failure		001							001	
Severe Storm		001; 005		004	004				001; 005	
Severe Winter Storm		001							001	
Wildfire		001							001	

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.15.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Newfield followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Town Council, Town Supervisor, Town DPW, and Code Enforcement. The Supervisor and Clerk represented the community on the Town of Newfield 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.



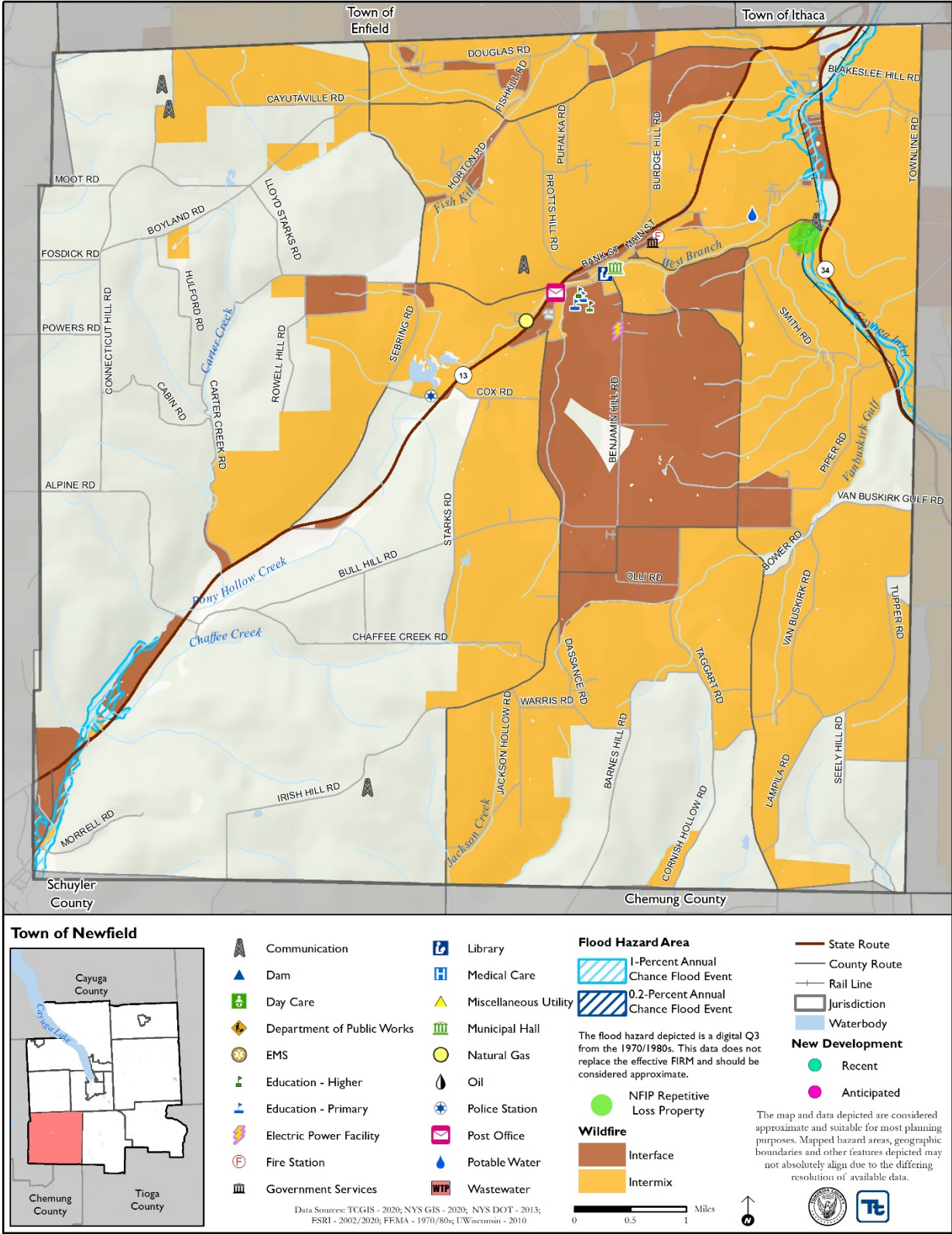
Additional documentation on the Town of Newfield’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.15.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Newfield that illustrates the probable areas impacted within the Town of Newfield. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Newfield has significant exposure. The map is provided on the next page.



Figure 9.15-1. Town of Newfield Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	VanBuskirk Gulf Residents Flood Mitigation Initiative		
Project Number:	2021-T NEWFIELD-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Overflowing creek, history of flooding during heavy rain, basements filling up causing personal property damage during the June 2015 flood. Culvert needed to be rightsized (enlarged) on Stone Jug Road. Flow of the creeks course was altered by 4" per hour rains carrying debris downstream where it jammed up the culvert effectively washing out the culvert.		
Action or Project Intended for Implementation			
Description of the Solution:	Replace culvert and conduct rightsizing to mitigate future washout. In addition, Work with the town DPW and the SWCD to conduct additional assessment on additional structural reinforcement measures and flood control barriers to reduce washout in the future and prevent overflow. The culvert installation would be phase 1 of the entire project. Finally, conduct outreach to residents that are affected by flood and provide mitigation and retrofitting solutions.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year flood	Estimated Benefits (losses avoided):	Repetitive Flooding
Useful Life:	NA	Goals Met:	1,3
Estimated Cost:	\$25,000 to \$100,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	Municipal Budget
Responsible Organization:	Town, DEC, Soil and Water and property owners.	Local Planning Mechanisms to be Used in Implementation if any:	Land Use
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	maintain forested riparian corridor	High	Protection of private homes, but does not resolve flood issue per se.
	VanBuskirk Gulf Residents Flood Mitigation Initiative	High	Comprehensive Flood Mitigation
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
--	--



Action Worksheet		
Project Name:	VanBuskirk Gulf Residents Flood Mitigation Initiative	
Project Number:	2021-T NEWFIELD-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The Town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Shelter Valley Residents		
Project Number:	2021-T NEWFIELD-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Overflowing creek, history of flooding during heavy rain, basements and first floor filling up causing personal property damage. During the June 2015 heavy flows from Benjamin Hill carving out landslides along Depot Road carrying debris downstream to Shelter Valley resulting in first floor flooding throughout the Shelter Valley neighborhood.		
Action or Project Intended for Implementation			
Description of the Solution:	Streambank stabilization of the West Branch of the Cayuga Lake Inlet will be needed. Work with the Soil and Water Conservation District to develop engineering plan to stabilize banks and mitigate overflow of creek/ flooding of properties. In addition, conduct outreach to neighborhood residents and provide potential mitigation and retrofitting solutions to mitigate future flood damage.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year flood	Estimated Benefits (losses avoided):	Flood prevention
Useful Life:	NA	Goals Met:	1,3
Estimated Cost:	\$100,000 to \$500,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	FMA, HMA, BRIC CDGB
Responsible Organization:	Town, DEC, Soil and Water, railroad and property owners.	Local Planning Mechanisms to be Used in Implementation if any:	Preservation and Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Streambank stabilization	\$100,000 to \$500,000	At the discretion of the DEC
	Building the berm	\$25,000 to \$100,000	Protection of private homes
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Shelter Valley Residents	
Project Number:	2021-T NEWFIELD-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	1	The project is technically feasible
Political	1	There are no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The Town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Sewer Study		
Project Number:	2021-T NEWFIELD-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Increased wastewater inflow during heavy rains causes backup and overflow of existing town treatment facility. With projected precipitation, this is likely to worsen so a solution will need to be developed, as the Town does not have the technical capacity to assess and develop mitigation measures for the existing facility.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct a study of water inflow and out flow, leak testing and increase of the leech reduce backup and overflow. This will require a hiring of an engineering firm as well as the collaboration with the Town public works. The second phase would be to implement to solutions developed by the firm. This will be a preliminary study from which technical proposals will be developed. Affiliated municipal officials that rely on this system would need to be stakeholders for this project.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year	Estimated Benefits (losses avoided):	Prevent sewage overflow/increased capacity
Useful Life:	30 years	Goals Met:	1,5
Estimated Cost:	\$100,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding received
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	FMA, NYSDEC Environmental Protection & Improvement Grants and Clean Water Act Section 604(b) Water Quality Planning Grants
Responsible Organization:	Town of Newfield	Local Planning Mechanisms to be Used in Implementation if any:	Local Planning Mechanisms
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Identify where stormwater may be infiltrating	Lower cost	Lower cost but actually not fully solve the issue
	Sewer Study	High cost	Best alternative
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Sewer Study	
Project Number:	2021-T NEWFIELD-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	0	The project might require some technical expertise.
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The Town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Develop Resilient Communications System		
Project Number:	2021-T NEWFIELD-001		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Lack of adequate broadband throughout the Town (particularly beyond hamlet) limiting residents' availability to medical care, communications, education and remote workforce.		
Action or Project Intended for Implementation			
Description of the Solution:	Work with Spectrum and other entities to install high speed broadband (100 mbps or better) throughout the Town. Initial inventory of housing units without broadband will need to be conducted, before the planning process can begin. Once the inventory is finalized, the town would need to work with the County, and Spectrum to develop a plan to increase capacity in the region.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500-year flood	Estimated Benefits (losses avoided):	High
Useful Life:	20 years	Goals Met:	1,5
Estimated Cost:	\$100,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 year once funding secured
Estimated Time Required for Project Implementation:	3 years	Potential Funding Sources:	The New NY Broadband Program, Municipal Budget, Climate Smart Communities
Responsible Organization:	Town, NYS and federal governments, private enterprise, partnering with neighboring counties and communities.	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Over the air Wi-Fi	\$25,000 /installation	Speed is not ideal but far better than current alternatives.
	High speed fiber connections	\$100,000	Unknown cost to end users, middle mile and last mile expenses are unknown at this time.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
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Action Worksheet		
Project Name:	Develop Resilient Communications System	
Project Number:	2021-T NEWFIELD-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects property
Property Protection	1	The project protects property
Cost-Effectiveness	1	The project is cost effective
Technical	0	The project might require some technical expertise.
Political	1	There is no political issues with the project
Legal	1	There are no legal complications for this project
Fiscal	-1	The Town is not able to fund the project without any external assistance.
Environmental	1	The project has a positive impact on the environment
Social	1	The project will have a positive social impact on the community
Administrative	1	The administration is fully supportive of the project
Multi-Hazard	1	The project covers multiple hazards of concern
Timeline	1	The timeline is reasonable given the project
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	11	
Priority (High/Med/Low)	High	



9.16 Village of Trumansburg

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

9.16.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Trumansburg’s hazard mitigation plan primary and alternate points of contact.

Table 9.16-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Rordan Hart, Mayor 56 East Main St., Trumansburg, NY mayor@trumansburg-ny.gov 607-227-0036	Tammy Morse/ Clerk 56 East Main St., Trumansburg, NY clerk@trumansburg-ny.gov 607-227-0036
NFIP Floodplain Administrator	
Tom Myers, Code Enforcement/Zoning Officer 56 E. Main St. Trumansburg, NY 14886 codeenforcement@trumansburg-ny.gov 607-227-0036	

9.16.2 Municipal Profile

The Village of Trumansburg is located in the northwest portion of the Town of Ulysses in Tompkins County. Trumansburg encompasses 1.2 square miles and is located along the Trumansburg Creek. The Village is approximately 12 miles north of Ithaca. Trumansburg is a modest tourist destination, located along the Cayuga and Seneca Lake Wine Trails, and its proximity to Taughannock Falls. Since 1991, the Finger Lakes Grass Roots Festival of Music and Dance has been hosted in the Village.

Trumansburg was founded in 1793 as a Revolutionary War Veteran Military Tract by Abner Treman who received a tract grant of 600 acres. A possible Post Office error recorded, and thus renamed, the Village as Trumansburg. The state incorporated the Village in 1872. Tompkins Trust Company, a bank founded by Colonel Hermon Camp was founded in Trumansburg in the 19th century and is now the largest bank in the county.



Trumansburg has been a commercial center for agriculture since its founding, and in the 1940s became an Ithaca suburb, home to many faculty and staff from Cornell University and Ithaca College.

Trumansburg is governed by an elected Mayor and four-person Board of Trustees.

According to the 2014-2018 American Community Survey, the Village of Trumansburg population is 1,760.

9.16.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.16-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.16-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.16-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	0	0	0	0	0	0	0	0	0	0
Multi-Family	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
Total	0	0	0	0	0	0	0	0	0	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 2014 to Present										
Sewer Plant renovation at Lake Street	Municipal	1		Lake Street		None		Complete		
Well development at Taughannock	Municipal	1		Taughannock Falls Park		None		Complete		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
70-unit housing development apartment – 19-acre	Housing	70		46 south street		None		Planned		
Rebuilding ambulance EMS service facility currently located at Fire Hall	Municipal	1		Unknown		None		Planned		

SFHA Special Flood Hazard Area (1% flood event)



* Only location-specific hazard zones or vulnerabilities identified.

9.16.4 Capability Assessment

The Village of Trumansburg performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.16.4). The Village of Trumansburg identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.16.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.16-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the "2015 I-Codes"), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
<i>city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.</i>					
Zoning Code	Yes	2012	Local	Local Zoning Board of Adjustment	No
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken "in accord with a well-considered plan"¹¹ or "in accordance with a comprehensive plan."¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level.</p> <p>*During the next update of the municipal zoning code, the Village will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	2002?	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Village updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Village encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	No				Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>					
Post-Disaster Recovery Plan or Regulation	No	-	-	-	No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*The Village will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Village.</p>					
Growth Management Regulation	No	-	-	Local Planning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Site Plan Review	Yes	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Local Planning Board	No
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	-	Yes
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019					
Flood Damage Prevention Law	No	Federal :Participation in the NFIP State: Community Risk and Resiliency Act (CRRA)	Local, State, Federal	-	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. *The Village's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Village will revise their law to include any revisions.					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	-	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	Yes	NYS Executive Law, Article 75	Local	Planning	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	No
Comment:					
Other Applicable Codes, Ordinances, & Requirements		-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a) 2008 currently being updated	Local	Planning	No
Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level.					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
*When the Village updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.					
Capital Improvement Plan	No				No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No				No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	Yes	Cayuga Lake Watershed Plan	Local	?	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes	2020	Local	?	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	Yes	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7)	County	Planning	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.					
Urban Water Management Plan	No	-	Local		No
Comment:					
Habitat Conservation Plan	No	-	Local	?	No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-	Local	?	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	Local	-	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	Local	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	-	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.					
Other (tourism, business dev, etc.)	No	-	-	-	-
Comment:					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). *When the Village updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Village and update goals and objectives to align with the HMP, as necessary.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	-	Local	Local OEM	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	-	-	No
Comment:					
Continuity of Operations Plan	No	-	-	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations."					
Public Health Plan	No	County	County Health	-	Yes
Comment:					
Other: Emergency Response Plan	No	-	-	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated
Comment:					

Table 9.16-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory <ul style="list-style-type: none"> If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction. 	No

9.16.4.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Trumansburg.

Table 9.16-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (mass notification system, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Fire/ Ambulance with Bangs and Schuyler County/ Seneca County Emergency Services
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	MRB Group
Engineers or professionals trained in building or infrastructure construction practices	Yes	MRB Group
Planners or engineers with an understanding of natural hazards	Yes	MRB Group
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	Yes	MRB Group
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	MRB Group
Scientist familiar with natural hazards	Yes	MRB Group
NFIP Floodplain Administrator (FPA)	No	-



Resources	Available? (Yes or No)	Department/ Agency/Position
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other		-

9.16.4.3 Fiscal Capability

The table below summarizes financial resources available to the Village of Trumansburg.

Table 9.16-6. Fiscal Capabilities

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

9.16.4.4 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Trumansburg.

Table 9.16-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes – social media and listserv



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Warning systems for hazard events; if yes, briefly describe.	Yes – County mass notification system
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes - multiple
Other	No

9.16.4.5 Community Classifications

The table below summarizes classifications for community programs available to the Village of Trumansburg.

Table 9.16-8. Community Classifications

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

Note:

N/A Not applicable

NP Not participating

- Unavailable

9.16.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Adaptive capacity for Disease Outbreak may be considered “high”, rather than medium for the Village, given the presence of our Village EMS Department and Trumansburg Family Medicine. The EMS Department is an ALS agency staffed 24/7 with experienced paramedics and in an outbreak scenario, in coordination with the physicians, NPs and RNs at Trumansburg Family Medicine, would be able to implement emergency protocols very quickly. As an example, Trumansburg was the only agency in the region which retrofitted an ambulance to CDC guidelines for infectious disease transport during the early stages of the Covid-19 pandemic response. There are also a number of locations in and around the Village that could be utilized or, if necessary, commandeered, for the purpose of triage or the isolation of patients in this, or other, hazmat-style emergency events.



Table 9.16-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	High
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

*High capacity exists and is in use

Medium capacity may exist, but is not used or could use some improvement

Low capacity does not exist or could use substantial improvement

Unsure Not enough information is known to assign a rating

9.16.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Tom Myers, Code Enforcement/Zoning Officer
56 E. Main St. Trumansburg, NY 14886

Table 9.16-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. Do you maintain a list of properties that have been damaged by flooding?	None available
Do you maintain a list of property owners interested in flood mitigation? How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes



NFIP Topic	Comments
If not, state why.	
Resources	
What local department is responsible for floodplain management?	None – planning board uses FEMA maps
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes MRB Group
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?	NA
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	None
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Site Plan review
What are the barriers to running an effective NFIP program in the community, if any?	NA – No flooding
Compliance History	
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)?	01/05/2000
Regulatory	
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?	NA
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	NA
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?	NA
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	No but would be interested



9.16.4.8 National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Trumansburg.

Table 9.16-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
Village of Trumansburg	3	3	\$ 810	1	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set. RL Repetitive Loss; SRL Severe Repetitive Loss

9.16.4.9 Additional Areas of Existing Integration

- The Village prohibits construction of structures within the 100-year floodplain.
- The Village continues to support retrofitting or relocation of structures located within hazard-prone areas to protect from future damages.
- The Village maintains compliance and good standing with the NFIP.
- The Village works to maintain high regulatory standards to manage flood risk in accordance with NYS freeboard requirements.
- The Village maintains mutual aid agreements with neighboring communities.
- The Village implements best farming and agriculture practices to minimize erosion and other environmental impacts from agriculture land use.
- The Village maintains well and infrastructure elevations to meet current code requirements
- The Village has a program to remove dangerous trees and promote planting healthy trees, and street tree programs as part of the Community Forest Management Plan
- The Village works along with County and regional agencies to conduct damage assessments, and with entities that support FEMA/SEMO paperwork after disasters.
- The Village supports county efforts to assess facilities for earthquake vulnerabilities and with the development of an earthquake management plan.
- The Village continues to develop, enhance, and implement existing emergency plans.
- The Village supports all county-wide and municipal initiatives identified in the HMP.

9.16.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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



Evacuation Routes

The following roads are designated evacuation routes for the Village.

- Route 89 Ext.
- South Street heading south
- State Route 96

However, evacuation routes are specific to hazard event and routes will vary according to the location of the event. The Village will identify evacuation routes according to procedures outlined in the ESF1 annex of the Tompkins County 2021 CEMP.

Sheltering

The following facilities are considered shelters for the Village residents.

Table 9.16-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Trumansburg Central School	NA	NA	Yes	Yes	Yes	Yes	
Fire Hall	Main St	100	NA	NA	NA	First aid	NA

Temporary Housing

There is no information regarding temporary housing sites, though the fairgrounds can be considered the largest open space for the Village and thus has been included in the table below. In the event temporary housing is needed, the Village will work with the county to find suitable locations using the locations identified in Section 4 (County Profile)Table 4-9 as a starting point.

Table 9.16-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Fair Grounds	Main Street	Backup power	Unknown	Fairgrounds	None



Permanent Housing

There are no permanent housing locations in the Village. Refer to the buildable land inventory in the County Profile. While the Village did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The Village can utilize this analysis to identify potential locations.

Table 9.16-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
None Available					

9.16.5 Hazard Event History Specific to the Village of Trumansburg

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Trumansburg’s history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.16-15 provides details regarding municipal-specific loss and damages the Village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.16-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	* While this event impacted the community, due to lack of resources damage history has not been documented.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	* While this event impacted the community, due to lack of resources damage history has not been documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	* While this event impacted the community, due to lack of resources damage history has not been documented.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had approximately \$75,000 in property damage.	* While this event impacted the community, due to lack of resources damage history has not been documented.
October 31-November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes		* While this event impacted the community, due to lack of resources damage history has not been documented.

Notes:

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

9.16.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Village of Trumansburg’s risk assessment results and data used to determine the hazard ranking.



9.16.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year event, or worst damage scenario. For those that do not meet this 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 Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event. According to the assessment, no critical facilities are located within a flood zone within the Village of Trumansburg.

Table 9.16-16. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No facilities identified				

Source: 2020 GIS

9.16.6.2 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 Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Village of Trumansburg 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 Trumansburg. The Village of Trumansburg has reviewed the Village hazard risk/vulnerability risk ranking table as well as its 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 of Trumansburg indicated the following:

The Village of Trumansburg water system utilizes multiple ground wells in two separate locations, all of which are fed directly from Cayuga Lake. This allows for redundant supply capacity in excess of two times the Village’s average consumption and, unless a catastrophic contamination of the Lake were to occur, it is highly unlikely that any drought would be severe enough to impact our ability to supply water.

Table 9.16-17. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Low
Drought	Low
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Low
Invasive Species	Medium
Ground Failure	Low
Severe Storm	High
Severe Winter Storm	Medium
Wildfire	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

**The Village of Trumansburg changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Village of Trumansburg*

9.16.6.3 Identified Issues

- The Village of Trumansburg has identified the following vulnerabilities within their community:
- The Village has outdated flood maps that do not accurately reflect the existing flood zones.
- The Village needs to determine possible locations for emergency housing given the Village does not have adequate space.

Specific areas of concern based on resident response to the Village of Trumansburg Hazard Mitigation Citizen survey include:

- The Village experiences power outages, especially during the winter. This can cause issues around essential services, heating, and computer systems.
- The existing transportation network

9.16.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.



9.16.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.16-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1) Project to be included in 2021 HMP or Discontinue 2) If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3) If discontinue, explain why.
						Cost	Level of Protection	
VT1		Landslide, Flash Flood	Village Public Works	Address erosion of stream bank at Village material disposal area	Nothing has been done			DEC will conduct soil sampling
						Damages Avoided; Evidence of Success		
						Level of Protection		
						Damages Avoided; Evidence of Success		



9.16.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Trumansburg has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Village provides EMS Services to entire community and neighboring jurisdictions

9.16.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Trumansburg participated in a mitigation action workshop in 2020 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).

Table 9.16-19 summarizes the comprehensive range of specific mitigation initiatives the Village of Trumansburg would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.16-20 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.16-19. 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
2021-V. Trumansburg-001	Shelter Development	1,3,5	All Hazards	<p>Problem: The Village of Trumansburg has limited capacity for development and does not have officially designated shelters/ temporary housing locations in place.</p> <p>Solution: Designate existing or construct new facility as village shelter. Consider designating the existing fairgrounds as a space for temporary housing</p>	No	No	Medium	Village Fire Dept.	Medium	High	HMGP	High	SIP	ES
2021-V. Trumansburg-002	Generator for Village Hall	1,5	All Hazards	<p>Problem: The Village hall does not have adequate backup power. This could cause significant issues for the Village during a hazard event and inability to provide adequate response as an emergency operations center.</p> <p>Solution: Install a 48-kilowatt generator on site that can provide adequate power to municipal building. This would need to be installed in a setting that is safe from flooding and severe wind.</p>	Yes	No	Short	Village DPW	Medium	High	HMGP/ BRIC	High	SIP	SP
2021-V. Trumansburg-003	Wastewater Treatment Plant Retrofitting	1,3,5	Flood	<p>Problem: Stormwater is infiltrating our Wastewater Treatment Plant. The Village is in the process of solving this issue and has conducted a</p>	Yes	No	Medium	Village DPW	High	High	HMGP, BRIC, HMA	High	SIP	SP



Table 9.16-19. 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
				<p>drainage study. The town needs funding to execute project.</p> <p>Solution: Storm water drainage study has been complete. The next steps are to conduct storm water/smoke testing o outline and identify ways to upgrade facility.</p>										
2021-V. Trumansburg-004	Tree Inventory	1,2	Severe Storm	<p>Problem: Many large old trees lining Village Streets. During weather events, falling trees and branches damage utility lines (above ground) which disrupts electricity for residents.</p> <p>Solution: Need to develop an inventory of Village Street Trees, removing hazards as needed in conjunction with other local utility vendors.</p>	No	No	Long	Village Board	Low	High	HMA, BRIC, Municipal Budget	High	NSP	PR
2021-V. Trumansburg-005	Power Grid Resilience	1,5	Severe Storms	<p>Problem: The Village experiences power outages, especially during the winter storm events that happen on an annual basis. While the outages are not long, the events are frequent which can lead to critical issues for the Village such as interrupted municipal services.</p> <p>Solution: The Village will work with entities like NYSEG</p>	No	No	2 years	Village, NYSEG	High	High	HMGP/ BRIC	High	SIP	SP



Table 9.16-19. 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
				to upgrade existing grid system that distributes energy to the village by improving vegetation maintenance schedule, replacing appropriate facilities and undergrounding utilities when appropriate. The Village will also coordinate with land owners to improve communications and risk reduction measures.										
2021-V. Trumansburg-006	Bridge Retrofitting	1,3	Flood	Problem: The Main St. bridge in downtown Trumansburg that has Trumansburg Creek running through the town often experiences heavy waterflow after a storm. Sometimes, the creek rises up close to the road and travels through the village at an accelerated velocity. Because of the aging infrastructure and extreme weather events, the concrete has slowly been eroding and has been of concern to citizens living along and close to the creek and the businesses on main street. As the village has a bustling downtown surrounding the creek, any damage can have detrimental effects on the community's economy.	No	No	2 years	Village DPW	High	High	FMA, New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG), BRIDGE NY	High	SIP	SP



Table 9.16-19. 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
				Solution: The village DPW along with the SWCD will need to conduct an assessment to determine best methods to keep the flow of Trumansburg creek under control. The bridge which carries route 96 needs to be retrofitted to handle the increasing water flow through the creek and mitigate any surficial flooding on main street. The Village as well as the SWCD shall jointly apply for mitigation funding to develop an engineering study and implement improvement project.										

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
- PDM Pre-Disaster 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

Table 9.16-20. 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	Total	High / Medium / Low
2021-V Trumansburg-001	Shelter Development	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High



Table 9.16-20. 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	Total	High / Medium / Low
2021-V Trumansburg-002	Generator for Village Hall	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-V Trumansburg-003	Wastewater Treatment Plant Retrofitting	1	1	1	1	1	1	0	1	-1	-1	1	1	1	1	9	High
2021-V Trumansburg-004	Tree Inventory	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-V Trumansburg-005	Power Grid Resilience	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-V Trumansburg-006	Bridge Retrofitting	1	1	1	1	0	1	1	1	0	1	1	1	1	0	11	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.16.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.16-21. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak		001; 002							002	001
Drought		001; 002							002	001
Extreme Temperature		001; 002							002	001
Flood		001; 002; 003; 006							002; 003; 006	001
Harmful Algal Bloom		001; 002							002	001
Invasive Species		001; 002							002	001
Ground Failure		001; 002							002	001
Severe Storm		001; 002; 005	004					004	002; 005	001
Severe Winter Storm		001; 002							002	001
Wildfire		001; 002							002	001

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.16.9 Staff and Local Stakeholder Involvement in Annex Development

The Village of Trumansburg followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Mayor and Clerk. The Mayor represented the community on the Village of Trumansburg 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.



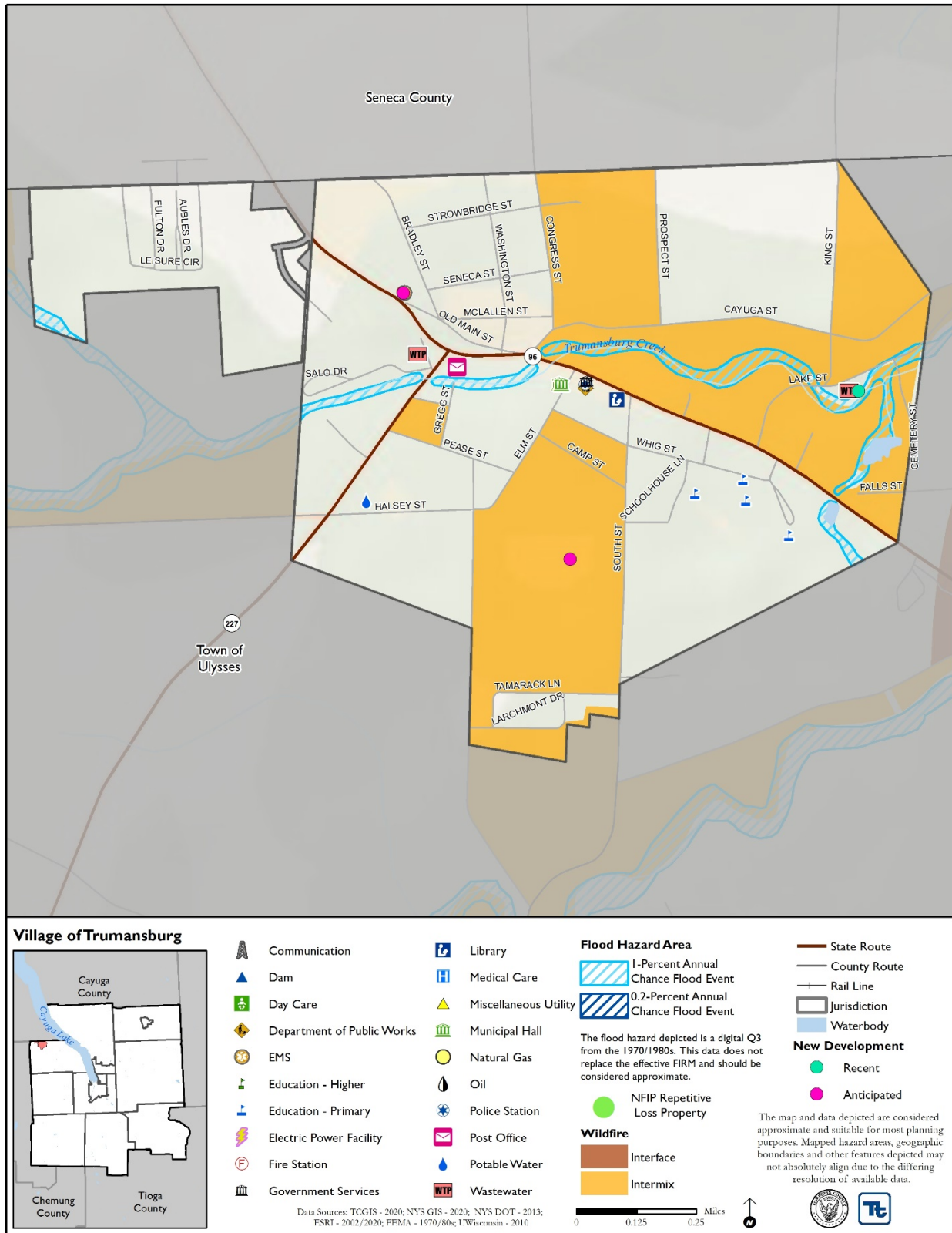
Additional documentation on the Village of Trumansburg’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.16.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Trumansburg that illustrates the probable areas impacted within the Village of Trumansburg. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Trumansburg has significant exposure. The map is provided on the next page.



Figure 9.16-1. Village of Trumansburg Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Wastewater Treatment Plant Retrofitting		
Project Number:	2021-V Trumansburg-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	Stormwater is infiltrating our Wastewater Treatment Plant. The Village Is in the process of solving this issue and has conducted a drainage study to develop a solution. The town needs funding to execute project.		
Action or Project Intended for Implementation			
Description of the Solution:	Storm water drainage study has been complete. The next steps are to conduct storm water/smoke testing o outline and identify ways to upgrade facility.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500 yr.	Estimated Benefits (losses avoided):	High
Useful Life:	20 years	Goals Met:	1,3,5
Estimated Cost:	\$225,000.00	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	BRIC, HMGP, HMA
Responsible Organization:	Village of Trumansburg	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Brand new facility	Very expensive	Too expensive
	retrofitting	High	Current problem will be solved at chapter cost
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Wastewater Treatment Plant Retrofitting	
Project Number:	2021-V Trumansburg-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Treatment plant would not run as much, savings in electricity
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Project funded by DASNY/SAM & VOTburg
Environmental	1	
Social	-1	
Administrative	-1	Engineers & Outside Contractors Needed
Multi-Hazard	1	
Timeline	1	Completion Spring 2021
Agency Champion	1	
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Tree Inventory		
Project Number:	2021-V Trumansburg-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Hazzard to life, health and property		
Description of the Problem:	Many large old trees lining Village Streets. During weather events, falling trees and branches damage utility lines (above ground) which disrupts electricity for residents.		
Action or Project Intended for Implementation			
Description of the Solution:	Need to develop an inventory of Village Street Trees, removing hazards as needed in conjunction with other local utility vendors.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	NA	Estimated Benefits (losses avoided):	Medium
Useful Life:	NA	Goals Met:	1,2
Estimated Cost:	Low	Mitigation Action Type:	NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding received.
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	HMA, HMGP, BRIC
Responsible Organization:	Village of Trumansburg	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Remove all trees	high	No trees will exist and will be ugly and expensive
	Tree inventory	Low	Will solve any issues around potential damage from trees. m
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			
Action Worksheet			



Project Name:	Tree Inventory	
Project Number:	2021-V Trumansburg-004 Tree Inventory	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects properties from potentially fallen trees
Property Protection	1	Protects properties from potentially fallen trees
Cost-Effectiveness	0	Benefits outweigh cost
Technical	1	No real technicality
Political	1	
Legal	1	
Fiscal	0	Need funding
Environmental	1	This is eco friendly
Social	1	
Administrative	0	Need admin support on this
Multi-Hazard	1	
Timeline	0	Feasible
Agency Champion	1	
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Main St. Bridge Retrofitting		
Project Number:	2021-V Trumansburg-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Flooding		
Description of the Problem:	The Main St. bridge in downtown Trumansburg that has Trumansburg Creek running through the town often experiences heavy waterflow after a storm. Sometimes, the creek rises up close to the road and travels through the village at an accelerated velocity. Because of the aging infrastructure and extreme weather events, the concrete has slowly been eroding and has been of concern to citizens living along and close to the creek and the businesses on main street. As the village has a bustling downtown surrounding the creek, any damage can have detrimental effects on the community's economy.		
Action or Project Intended for Implementation			
Description of the Solution:	The village DPW along with the SWCD will need to conduct an assessment to determine best methods to keep the flow of Trumansburg creek under control. The bridge which carries route 96 needs to be retrofitted to handle the increasing water flow through the creek and mitigate any surficial flooding on main street. The Village as well as the SWCD shall jointly apply for mitigation funding to develop an engineering study and implement improvement project.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No X
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No NA
(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:	500 yr.	Estimated Benefits (losses avoided):	High
Useful Life:	20 years	Goals Met:	1,3
Estimated Cost:	\$500,000- \$1 Million	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	FMA, New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG), BRIDGE NY
Responsible Organization:	Village of Trumansburg DPW	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate all properties on main St.	High	Legally and Financial infeasible but does mitigate flooding
	Bridge Retrofit	High	Expensive but feasible and is best alternative
Progress Report (for plan maintenance)			



Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	



Action Worksheet		
Project Name:	Main St. Bridge Retrofitting	
Project Number:	2021-V Trumansburg-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The project protects life and property
Property Protection	1	The project protects life and property
Cost-Effectiveness	1	The benefits outweigh the costs in the long term
Technical	1	The village has the technical support needed for this project
Political	0	There is no opposition to project
Legal	1	There are no legal challenges at this time
Fiscal	0	The village needs external funding
Environmental	1	This project has a positive environmental impact
Social	0	There are no negative social impacts from this project
Administrative	1	There are no administrative issues
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The timeline is reasonable
Agency Champion	1	The village DPW would lead the project
Other Community Objectives	0	Unknown at this time
Total	11	
Priority (High/Med/Low)	High	



9.17 Town of Ulysses

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

9.17.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Ulysses' hazard mitigation plan primary and alternate points of contact.

Table 9.17-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: John Zepko/Planner Address: 10 Elm St, Trumansburg NY Phone Number: 607-387-5767 Email: zepko@ulysses.ny.us	Name/Title: Michelle Wright/Deputy Supervisor Address: 10 Elm St, Trumansburg NY Phone Number: 607-387-5767 Email: michelle@ulysses.ny.us
NFIP Floodplain Administrator	
Name/Title: John Zepko, CFM Address: 10 Elm St, Trumansburg NY Phone Number: 607-387-5767 Email: zepko@ulysses.ny.us	

9.17.2 Municipal Profile

The Town of Ulysses is located in the northwest corner of Tompkins County, bordered by Enfield and Ithaca to the south. Cayuga Lake shapes the eastern border of the Town. Ulysses encompasses 36.84 square miles, and the Village of Trumansburg is the Town's cultural center to the northwest of the Town. To the northeast is Taughannock Falls State Park. New York State Route 89 runs along Cayuga Lake through Ulysses, and Routes 96 and 227 converge in the Village of Trumansburg.

Ulysses was settled in the 1790s as a Revolutionary War veteran Military Tract. The Town was organized as early as 1799 and became part of Tompkins County at its founding in 1817. Milling, manufacturing, and agriculture were the main industry in the Town. The Babcock Poultry Farm, whose scientific poultry breeding grew into a huge enterprise was started in Ulysses. Today, dairy farms and fruit orchards dominates the agricultural industry. Ulysses' proximity to Ithaca has brought many professionals to the Town.



Ulysses is governed by a Town Board consisting of an elected Town Supervisor, and four elected Councilpersons. Each is elected for a four-year term.

According to the 2014-2018 American Community Survey, the Town of Ulysses has a population of 3,223.

9.17.3 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 understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.17-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.17-1 at the end of this annex illustrates the geographically delineated hazard areas and the location of potential new development, where available.

Table 9.17-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
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
Single Family	13	-	12	-	10	-	14	-	14	-
Multi-Family	1	-	2	-	0	-	0	-	0	-
Other (commercial, mixed-use, etc.)	15	-	20	-	18	-	17	-	16	-
Total	29	-	37	-	28	-	29	-	30	-
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 2014 to Present										
None	-	-		-		-		-		
None	-	-		-		-		-		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
None	-	-		-		-		-		
None	-	-		-		-		-		

SFHA Special Flood Hazard Area (1% flood event)

*The Town of Ulysses does not have information regarding Special SFHA area

* Only location-specific hazard zones or vulnerabilities identified.

9.17.4 Capability Assessment

The Town of Ulysses performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the



components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, 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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

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 this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.17.4). The Town of Ulysses identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. **This is shown in bold text in the comments box where appropriate.** Appendix I provides the results of the planning/policy document review.

9.17.4.1 Planning, Legal, and Regulatory Capability

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

Table 9.17-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Codes, Ordinances, & Requirements					
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Local Code Department	Yes
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the “2015 I-Codes”), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.					
Zoning Code	Yes	Dec. 2019 – Chapter 212, Zoning	Local	Local Zoning Board of Adjustment – Zoning Officer	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken “in accord with a well-considered plan”¹¹ or “in accordance with a comprehensive plan.”¹² Unless the Town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer to the extensive body of case law to determine how zoning can meet the more general “comprehensive plan” requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level</p> <ul style="list-style-type: none"> • Chapter 212, Zoning. It is the purpose of this Chapter to promote the health, safety, morals and general welfare of the community; to lessen congestion in the streets; to secure safety from fire, panic and other dangers; to provide adequate light and air; to prevent overuse of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements; and under and pursuant to Chapter 62, Articles 9 and 16, of the Consolidated Laws of New York State. • The Zoning Officer is authorized to order, in writing, the remedying of any condition or activity found to exist in, on, or about any building, structure, or premises in violation of this chapter. • The Town created the Conservation District to protect large areas of steep slopes, wetlands, and highly erodible soil, where any future development may have an adverse environmental impact on both the land and Cayuga Lake. • Under the Subdivision section of this Chapter, Land subject to flooding. Land subject to flooding shall not be platted for residential occupancy, nor for such other uses as may increase danger to health, life or property, or aggravate the flood hazard, but such land within the plat shall be set aside for such uses as shall not be endangered by periodic or occasional inundation, or improved in a manner satisfactory to the Planning Board to remedy the hazardous conditions. <p>*During the next update of the municipal zoning code, the Town will review the HMP and determine how they can incorporate the HMP into the zoning code. By doing so, it will help promote development and redevelopment patterns that are at less risk from known hazards.</p>					
Subdivision Regulations	Yes	Dec. 2019	Local	Local Planning Board	No
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <p>*When the Town updates the subdivision regulations, they will review the HMP and consider different ways to integrate the HMP into the regulation. By doing so, it helps the Town encourage new developers to design areas that avoids or minimizes hazards.</p>					
Stormwater Management Regulations	Yes	2007 – Local Law No. 3	Local	Stormwater Management Officer, SMO	Yes
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System (SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p> <ul style="list-style-type: none"> • Local Law No. 03, 2007 for Stormwater Management and Erosion & Sediment Control. The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in Section 1 of this Chapter • This local law seeks to meet those purposes by achieving the following objectives: <ul style="list-style-type: none"> ○ 2.1 Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit no. GP-02-02 or as amended or revised; ○ 2.2 Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; ○ 2.3 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; and 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<ul style="list-style-type: none"> ○ 2.4 Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality. <ul style="list-style-type: none"> • The municipality shall designate a Stormwater Management Officer who shall accept and review all stormwater pollution prevention plans and forward such plans to the applicable municipal board. • All land development activities subject to review and approval by the Planning Board of the Town of Ulysses under subdivision or site plan review and the Town Board or the Zoning Board of Appeals of the Town of Ulysses shall be reviewed subject to the standards contained in this local law. • No application for approval of a land development activity shall be reviewed until the Storm Water Officer and the appropriate board, as applicable under Section 4 of this law has received a Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the specifications in this local law. 					
Post-Disaster Recovery Plan or Regulation	No				No
Comment:					
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes
<p>Comment: 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> <p>*The Town will review the HMP and identify areas of integration that they can incorporate into their real estate disclosure procedures. This can include developing disclosure requirements to have natural hazard related information and include all natural hazards that can impact the Town.</p>					
Growth Management Regulation	Yes	Zoning Code Chapter 212 2019	Local	Local Planning & Zoning Board	No
<p>Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.</p>					
Site Plan Review	Yes	§ 212-19 2019	Local	Local Planning Board	No
<p>Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.</p> <p>*When the Town updates the site plan review requirements, they will review the HMP and identify ways, if any, to integrate the HMP into the requirements.</p>					
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Local Town, Planning & Zoning Boards	Yes
<p>Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019</p>					
Flood Damage Prevention Law	Yes	Chapter 89 Flood Damage Prevention 1987	Local	Floodplain Administrator – Zoning Officer	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <ul style="list-style-type: none"> • Chapter 89, Flood Damage Prevention. The Town Board of the Town of Ulysses finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Town of Ulysses and that such damages may include: 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<p>destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life.</p> <ul style="list-style-type: none"> 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: (i) 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; (ii) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (iii) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters; (iv) control filling, grading, dredging and other development that may increase erosion or flood damages; (v) regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands; and (vi) qualify and maintain for participation in the National Flood insurance Program. The Ulysses Town Zoning Officer is hereby appointed local administrator to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. A development permit shall be obtained before the start of construction or any other development within the area of special flood hazard as established in § 89-6. The following standards apply to all new subdivision proposals and other proposed development in areas of special flood hazard: <ul style="list-style-type: none"> Proposals shall be consistent with the need to minimize flood damage; Public utilities and facilities such as sewer, gas, electrical and water systems shall be located and constructed so as to minimize flood damage; and Adequate drainage shall be provided to reduce exposure to flood damage. New construction and substantial improvements of any residential structure shall have the lowest floor, including basement or cellar, elevated to or above the base flood elevation. New construction and substantial improvements of any commercial, industrial or other nonresidential structure, together with attendant utility and sanitary facilities, shall either: have the lowest floor, including basement or cellar, elevated to or above the base flood elevation; or be floodproofed to the base flood level. When floodway data is available for a particular site as provided by § 89-12B, all encroachments, including fill, new construction, substantial improvements, and other development, are prohibited within the limits of the floodway unless a technical evaluation demonstrates that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. <p>*The Town's law meets the minimum requirements set by NYS. In the event those requirements are revised, the Town will revise their law to include any revisions.</p>					
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	Chapter 156 Stormwater Management and Erosion and Sediment Control 2007	Local	Planning Board, Stormwater Management Officer	Yes
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.					
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.					
Climate Adaptation	Yes	NYS Executive Law, Article 75	Local	?	Yes
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.					
Disaster Recovery Ordinance	No	-	-	-	No
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment:					
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive Plan	Yes	General City Law section 28a(3)(a); Town Law section 272-a(2)(a); Village Law section 7-722(2)(a) 2009	Local	Planning	No
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level</p> <ul style="list-style-type: none"> • Comprehensive Plan. The Goals of the Comprehensive Plan are to: Preserve and protect the Town's natural and environmental resources; Protect existing water resources and maintain water quality; and Provide a high quality of life for all residents through proactive planning that supports the goals of the local community, complements the existing rural character of the Town, and protects the value of natural and environmental resources. • The Plan's Goals will be addressed by following through on the following Objectives to; Investigate and implement various mechanisms to protect and preserve environmentally sensitive areas such as steep slopes, wetlands, Unique Natural Areas, mature forests and important wildlife habitats in all Land Use areas; Encourage and assist interested landowners in participating in a conservation easement program to protect unique and sensitive environmental features/resources on their property, and explore other incentive opportunities that provide for long-term protection of important resources on private land; Review and revise existing Town regulations to more adequately protect streams in the Town through buffer zones, setbacks, or other protection mechanisms such as a stream protection overlay zone; Establish regulations to limit development in and near floodplains; Support regular periodic water quality testing and evaluation for major creeks and streams to ensure protection of Cayuga Lake water quality; Work to identify failing septic systems with a priority to those locations with the largest impact on lake water quality; and Update the Town's Zoning Law to ensure consistency with the Future Land Use Plan. <p>*When the Town updates their comprehensive plan, they will review the HMP and identify any opportunities to integrate the HMP into the comprehensive plan. This will help promote consistency between the two plans and encourage multi-objective management and planning in the community.</p>					
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	-	No
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.					
Disaster Debris Management Plan	No	-	-	-	No
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.					
Floodplain or Watershed Plan	Yes	Cayuga Lake LWRP	Local/County	Cayuga County Planning	No
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.					
Stormwater Plan	Yes	Ulysses SWMP	Local	SMO	No



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.					
Open Space Plan	Yes	Agricultural Protection Plan 2013	Local	Town Board	Yes
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses. Town has Farmland and Agricultural Protection Plan, adopted 2013					
Urban Water Management Plan	No	-	-	-	No
Comment:					
Habitat Conservation Plan	No	-			No
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.					
Economic Development Plan	No	-			No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.					
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	Local	-	Yes
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Community Wildfire Protection Plan	No	-	-	-	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.					
Forest Management Plan	No	-	-	-	No
Comment:					
Transportation Plan	No	-	Local	-	No
Comment:					
Agriculture Plan	Yes	NYCRR Part 390 Agricultural and Farmland Protection - 2013	Local	Planning	Yes
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers. Created 2013 <ul style="list-style-type: none"> • Agricultural and Farmland Protection Plan 2013. The Goal of the Plan is to enhance land use policies to better protect farmland. That Goal will be met by accomplishing the following objectives addressed in the Plan; <ul style="list-style-type: none"> ○ Encourage developers to identify important farmlands and other key environmental features including those that would affect water quality and viewsheds at the beginning of the design process, and then design a residential subdivision in harmony with those resources to the extent practical. 					



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated
<ul style="list-style-type: none"> Develop a Strategic Plan for Farmland Ownership, and begin work to update the Zoning Law and implement other policies to provide further, long-term protection to farmland. The Town should explore programs to reduce the property tax burden on agricultural lands and provide incentives and funding mechanisms to support farmland protection and open space. Revise/enhance the Town's subdivision regulations. Ensure future infrastructure investments are consistent with the Future Land Use Plan (as part of the 2009 Comprehensive Plan 					
Other (tourism, business dev, etc.)	Yes	Natural Resource Inventory - 2018	Local	Planning	No
Comment: Natural Resource Inventory, 2018. The Plan calls for the conservation of existing natural resources and land to maintain the existing rural characteristics of the municipality, and the reduction of wetland degradations by increasing the use of green infrastructure and thereby prevent/ mitigate flooding.					
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Local OEM	Yes
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC). <i>*When the Town updates their CEMP, they will review the HMP and identify any areas that can be integrated. This can include an analysis of the potential hazards to the Town and update goals and objectives to align with the HMP, as necessary.</i>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	-	Yes
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.					
Post-Disaster Recovery Plan	No	-	Local	-	No
Comment:					
Continuity of Operations Plan	No	-	Local	-	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.					
Public Health Plan	No	-	Local	-	-
Comment:					
Other: Emergency Response Plan	Yes	1994	Local	-	No
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.					
Other: Special Purpose Ordinances (such as critical or sensitive areas)					
Comment:					



Table 9.17-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes
Permits are tracked by hazard area. For example, floodplain development permits.	Yes
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No

9.17.4.2 Administrative and Technical Capability

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

Table 9.17-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Conservation Advisement Committee
Open Space Board/Committee	Yes	Conservation Advisement Committee
Economic Development Commission/Committee	No	-
Warning Systems / Services (mass notification system, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Emergency Services
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Zoning/ Code Enforcement
Engineers or professionals trained in building or infrastructure construction practices	Yes	Zoning/ Code Enforcement
Planners or engineers with an understanding of natural hazards	Yes	Zoning/ Code Enforcement
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/ Code Enforcement
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Zoning/ Code Enforcement
Surveyor(s)	No	-
Emergency Manager	Yes	Deputy Supervisor
Grant writer(s)	No	-
Resilience Officer	No	-
Other	-	-



9.17.4.3 Fiscal Capability

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

Table 9.17-6. Fiscal Capabilities

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

9.17.4.4 Education and Outreach Capability

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

Table 9.17-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	No
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	None
Other	No

9.17.4.5 Community Classifications

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



Table 9.17-8. 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	-	-
NYSDEC Climate Smart Community	Yes	Bronze	2018
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	-	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

9.17.4.6 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). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.17-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temp	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating

9.17.4.7 National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.



NFIP Floodplain Administrator (FPA)

Name/Title: John Zepko, CFM
Address: 10 Elm St, Trumansburg NY
Phone Number: 607-387-5767
Email: zepko@ulysses.ny.us

Table 9.17-10. Floodplain Administrator Questionnaire

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. Do you maintain a list of properties that have been damaged by flooding?	Lake front properties, areas of riverine flooding along a multitude of creeks and ravines A list is not maintained
Do you maintain a list of property owners interested in flood mitigation? How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction?	When the cost of repair is 50% or more of structure's market value. I have never experienced a Flood event requiring Substantial Damage Determinations
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	Unknown
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	No. FIRM maps are outdated. They do not account for climate change impacts. Base flood elevations are not provided for much of the Town
Resources	
What local department is responsible for floodplain management?	Zoning & Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	Yes - planner
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 Training for substantial damage determinations
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review, GIS, SFHA determinations
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	If the improvements exceed 50% of the value of the building it is as substantial improvement
What are the barriers to running an effective NFIP program in the community, if any?	Funding for staff – local gov employees fill too many roles



NFIP Topic	Comments
Compliance History	
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	Unknown
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	1/5/2000
Regulatory	
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 89 – Flood Damage Prevention - 1987
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Unknown
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
Community Rating System (CRS)	
Does your jurisdiction participate in CRS? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	No

9.17.4.8 National Flood Insurance Program (NFIP) Summary

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

Table 9.17-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties
TOWN OF ULYSSES	18	3	\$5798.14	0	-

Source: FEMA 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 7, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss

9.17.4.9 Additional Areas of Existing Integration

Police protection in the Town of Ulysses is provided through a number of police organizations. The Trumansburg Police Department is located at 5 Elm Street in the Village of Trumansburg. The Trumansburg Police Department provides law enforcement services within the Village boundaries. Law enforcement services outside of the Village boundaries in the Town are provided by the Tompkins’s County Sheriff’s department



and New York State Police. Due to the location of Taughannock Falls State Park within the Towns borders, the Town also benefits from patrol and policing by the New York State Park Police.

Fire and Ambulance Services are provided to the Town of Ulysses from the Trumansburg Fire Department. The Trumansburg Fire Department provides fire and EMS services to a 56-square mile area that includes the Town of Ulysses and portions of the Towns of Covert and Hector. The fire department is located at 74 West Main Street in the Village of Trumansburg.

Planning and Regulation in the Town further integrates mitigation. Past Comprehensive Plan Updates have addressed a number of issues related to hazard mitigation, namely the impacts of flash flooding. An example is the expressed need for formalized stream buffer protections. Ulysses is one of the few Town’s in Tompkins County with stream buffer requirements in multiple locations. Future updates to the comprehensive plan will integrate information gathered through this mitigation plan update.

9.17.4.10 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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

Evacuation Routes

The Town has designated route NYS 96 and NYS Route 89 as the main evacuation routes during a hazard event. Generally speaking, Route 96227 heading out of Trumansburg is the preferred road that points westward that is the third evacuation route given its higher elevation, further distance from Cayuga Lake and has fewer intersection tributaries. Certainly, based on particular hazard situations, evacuation routes may vary and would be communicated to residents through a variety of formats in the Town.

Sheltering

The following table provides information on the potential shelter locations that are not officially designated.

Table 9.17-12. Shelter Locations in the Municipality

Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Trumansburg Conservatory of Fine Arts	5 McLallen St, Trumansburg	Unsure	No	Yes	No	None	None



Shelter Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Namaste Montessori School	1608 Trumansburg Rd	Unsure	Yes	Yes	No	First AID	None
Regional Access	1609 Trumansburg Road, Ithaca	Unsure	Yes	Yes	Yes	None	None
The American Legion	4431 East Seneca Road, Trumansburg	Unsure	Yes	Yes	No	First AID	None
Spruce Row Campsite	2271 Kraft Rd., Ithaca	Unsure	Yes	Yes	No	None	None
Trumansburg Fish & Game Club	7227 Searsburg Rd	Unsure	Yes	Yes	No	None	None
Franziska Racker Center	3226 Wilkins Rd, Ithaca	Unsure	No	Yes	No	None	None
Trumansburg Central School	100 Whig Street, Trumansburg	Unsure	No	Yes	Yes	First AID	None
Juniper Manor I & II		Unsure	No	Yes	Yes	None	None

Temporary Housing

The Town has not identified any temporary housing locations.

Table 9.17-13. Temporary Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
The Town does not have any identified temporary housing locations.					

Permanent Housing

The Town has not identified any permanent housing locations.

Table 9.17-14. Permanent Housing Locations in the Municipality

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Please refer to buildable land inventory in County Profile.					



9.17.5 Hazard Event History Specific to the Town of Ulysses

Tompkins County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. 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 Ulysses' history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Tompkins County. Table 9.17-15 provides details regarding municipal-specific loss and damages the Town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.17-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 3, 2014	Heavy Rain and Flash Flooding		Showers and thunderstorms in the area produced torrential downpours. In the County, several roadways were inundated causing approximately \$100,000 in property damage.	* While this event impacted the community, due to lack of resources damage history has not been documented.
June 14-15, 2015	Heavy Rain and Flash Flood		A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. In Tompkins County, flooding caused the washout of numerous bridges in the area. The County had approximately \$1.5 million in damages from this event.	* While this event impacted the community, due to lack of resources damage history has not been documented.
March 14-15, 2017	Severe Winter Storm and Snowstorm (DR-4322)	Yes	Snowfall ranged between 12 and 24 inches in Tompkins County with the highest amounts in the far southeast part of the county.	* While this event impacted the community, due to lack of resources damage history has not been documented.
July 24, 2017	Heavy Rain and Flash Flooding		Widespread thunderstorms produced three to inches of rain. This led to streams and creeks overflowing their banks and flash flooding in many areas. The County had	* While this event impacted the community, due to lack of resources damage history has not been documented.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			approximately \$75,000 in property damage.	
October 31- November 1, 2019	Severe Storms, Straight-Line Winds and Flooding (DR-4472)	Yes	No description available	* While this event impacted the community, due to lack of resources damage history has not been documented.

Notes:

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

9.17.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Town of Ulysses’ risk assessment results and data used to determine the hazard ranking.

9.17.6.1 Critical Facilities

New York Department of Environmental Conservation (DEC) 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 Special Flood Hazard Area (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, the 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 or 500-year event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The Town of Ulysses does not have any critical facilities that are exposed to 1% or 0.2% flood hazard zones, according to FEMA HAZUS that estimates the damage and loss of use to critical facilities as a result of measured hazards of concern.

9.17.6.2 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 Section 5 (Risk Assessment) of the



plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Tompkins County as a whole. Therefore, each Town of Ulysses 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 Ulysses. The Town of Ulysses has reviewed the Town hazard risk/vulnerability risk ranking table as well as its 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 of Ulysses adjusted the rankings based on local input and indicated the following:

Drought is not a significant threat for the town due to its proximity to the lake.

- Of the hazards identified flooding is a major concern for the town and needs to be re-ranked to at least medium. Most mitigation projects revolve around flooding.
- In comparison to other municipalities, the town of Ulysses does not have significant concern around severe storms and therefore will re-rank as medium.
- Given the geographical characteristics of the Town, snow storms are a significant hazard and will be re-ranked as high.

Table 9.17-16. Hazard Ranking Input

Hazard	Ranking
Disease Outbreak	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Ground Failure	Medium
Severe Storm	Medium
Severe Winter Storm	High
Wildfire	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

**The Town of Ulysses changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the Town of Ulysses*

9.17.6.3 Identified Issues

The Town of Ulysses has identified the following vulnerabilities within their community:



- The Town does not have an updated emergency management plan.
- The Town has strong winds due to overall rolling/ flat topography causing snow drifts along state Route 96.
- The Town does not have a designated emergency shelter.

Specific areas of concern based on resident response to the Town of Ulysses Hazard Mitigation Citizen survey include:

- None identified.

9.17.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.17.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2014 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



Table 9.17-17. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1) Project to be included in 2021 HMP or Discontinue 2) If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3) If discontinue, explain why.
						Cost	Level of Protection	
U1		Lake Flood	Town of Ulysses	Appoint a contact person for lakeshore sandbagging (Maplewood Point or Willow Point) and determine how the action is coordinated.	Complete	NA	Low	Complete
U2		Landslide	Tompkins County Highway	Reduce of escarpment erosion along South Street Extension at Taughannock Creek	In progress	-	-	Under development



9.17.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Ulysses has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- The Town officially became a designated Climate Smart community in 2017-18.
- The Town is working with the soil and water conservation district to map eroding ditches.
- The Town is working with the Intermunicipal Organization to mitigate effects and cause of HABs.

9.17.7.3 Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Ulysses participated in a mitigation action workshop in 2020 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).

Table 9.17-18 summarizes the comprehensive range of specific mitigation initiatives the Town of Ulysses would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.17-19 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.17-18. 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
2021-T ULYSSES-001	Update and develop Emergency Management Plan	All Goals	All Hazards	<p>Problem: Winter storms can expose vulnerabilities throughout the Town and pose a high risk. During these events, the Town is not equipped to handle potential response and need an organized structure to be prepared for future events.</p> <p>Solution: Develop a local Comprehensive Emergency Management Plan (CEMP) identifying elderly or disabled individuals who may need meals or shelter. Identify management responsibilities, potential hazards & responses, response organization, and ensure that necessary procedures resources are in place</p>	No	No	Medium	Town EMS/ Fire DEPT	Medium	High	HMA; Public Assistance: Hazard Mitigation Funding Under Section 406; Assistance to Firefighters Grant Program	High	LPR	ES
2021-T ULYSSES-002	Formalize Mutual Aid	1,2,4	All Hazards	<p>Problem: The Town currently has various mutual aid agreements that are on a casual basis. This is a problem given the Town cannot document that it is cooperating with municipalities in the region around shared services.</p> <p>Solution: Formalize/standardize</p>	No	No	Short	Town Board and DPW with associated municipalities.	Low	High	Municipal Budget	High	LPR	ES



Table 9.17-18. 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
				mutual aid agreements with neighboring municipalities to cover staff or equipment shortage.										
2021-T ULYSSES-003	Water Study	1,3,5	Drought, Flood, Severe Storms, HABs	<p>Problem: Much of the community relies on private wells for water supply. There is anecdotal evidence of poor water supply and concern over quality and supply</p> <p>Solution: Commission USGS to study ground water supply and develop BMPs to protect and manage ground water.</p>	No	No	Medium	Town Board and Planning/USGS	Medium	High	NYS Climate Smart Communities, Clean Water Act Section 604(b) Water Quality Planning Grant	High	LPR	PR
2021-T ULYSSES-004	Culvert Replacement	1,5	Flood	<p>Problem: The Town experiences flash flood events and subsequent damages. This leads to road closures, damages, and emergency rescues.</p> <p>Solution: Replacement of drainage systems or culverts as necessary. Coordinate with and support neighboring communities (such as Trumansburg) in hazard identification and mitigation.</p>	No	No	Medium	Town Board and SWCD	High	High	HMGP, BRIC, HMA, NYSDEC	High	SIP	SP
2021-T ULYSSES-005	Living Snow Fence	1,3,5	Severe Winter Storm	<p>Problem: Due to the Town's overall rolling and flat topographical</p>	No	No	Long	Town/ Landowners	Medium	High	BRIC, NYS Climate Smart	High	SIP	SP



Table 9.17-18. 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
				<p>characteristics, Ulysses often experiences severe wind and snow gusts that can cause whiteouts and snow drifts in the road which subsequently causes hazardous driving conditions.</p> <p>Solution: Work with land owners and the County to develop hedges along roadsides to reduce wind along road. Where needed, develop a living snow fence that would be a permanent structure that reduces overall snowdrifts.</p>							Grant, Transportation Investment Generating Economic Recovery (TIGER)			

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
- PDM Pre-Disaster 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

Table 9.17-19. 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	Total	High / Medium / Low
2021-T ULYSSES-001	Update and develop	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High



Table 9.17-19. 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	Total	High / Medium / Low
	Emergency Management Plan																
2021-T ULYSSES-002	Formalize Mutual Aid	1	1	1	1	1	0	1	1	1	1	1	0	1	1	12	High
2021-T ULYSSES-003	Water Study	1	1	1	1	1	1	-1	1	1	0	0	1	1	0	9	High
2021-T ULYSSES-004	Culvert Replacement	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-T ULYSSES-005	Living Snow Fence	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).



9.17.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.17-20. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				PR	PP	PI	CRS		ES
	LPR	SIP	NSP	EAP				NR	SP	
Disease Outbreak	001; 002									001; 002
Drought	001; 002; 003				003					001; 002
Extreme Temp	001; 002									001; 002
Flood	001; 002; 003	004			003				004	001; 002
Harmful Algal Bloom	001; 002; 003				003					001; 002
Invasive Species	001; 002									001; 002
Severe Storm	001; 002; 003				003					001; 002
Severe Winter Storm	001; 002	005							005	001; 002

9.17.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Ulysses followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: Planning, Code Enforcement, and Highway. The Town Planner represented the community on the Tompkins 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.

Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

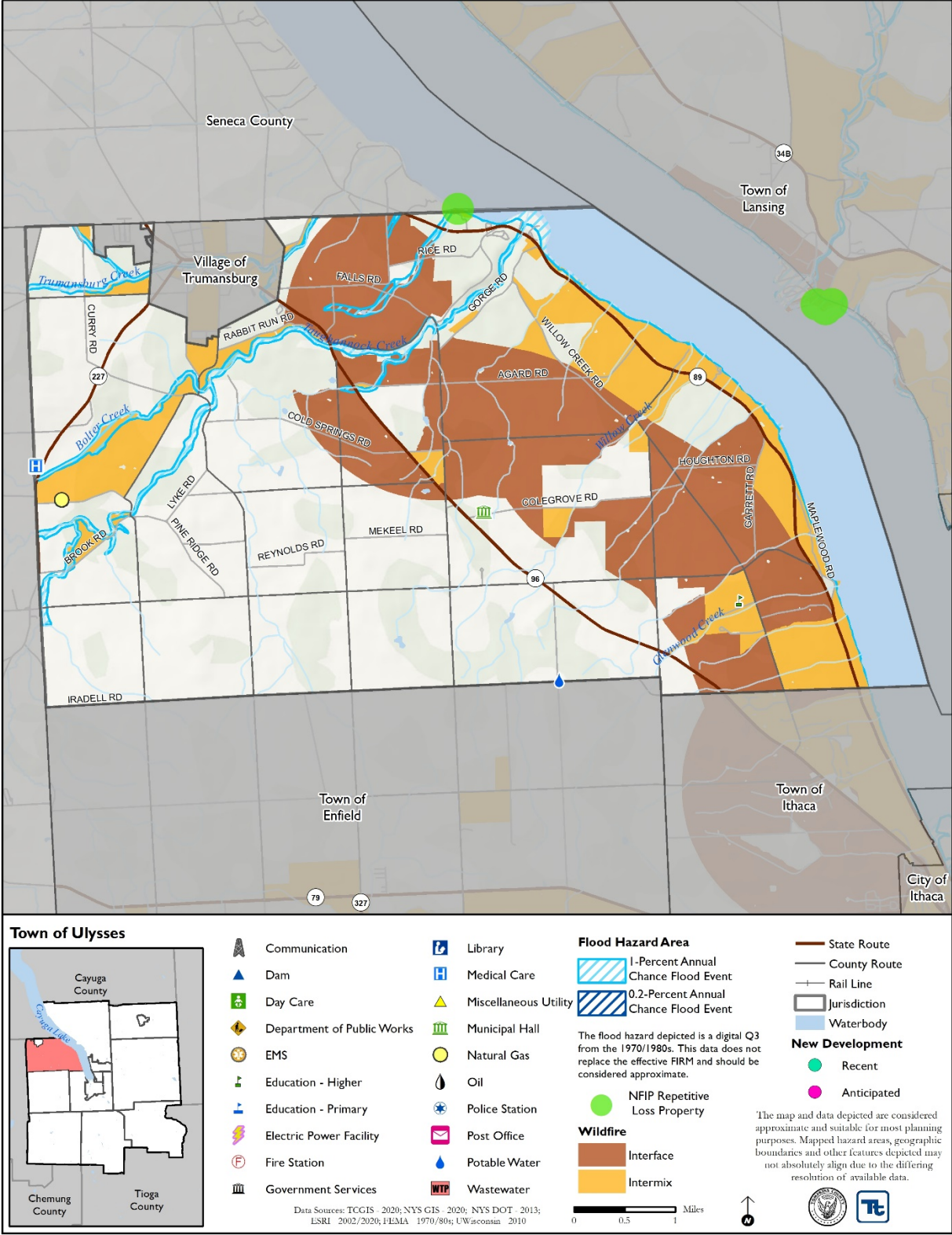


9.17.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Ulysses that illustrates the probable areas impacted within the municipality. This map is based on the best available data at the time of the preparation of this plan and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Ulysses has significant exposure. The map is provided on the next page.



Figure 9.17-1. Town of Ulysses Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Update and Develop Emergency Management Plan		
Project Number:	2021-T ULYSSES-001		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Town of Ulysses has an outdated Comprehensive Emergency Management Plan that either needs to be updated or redeveloped. By not having an emergency management plan, the Town might not have adequate support and guidance in times of need.		
Action or Project Intended for Implementation			
Description of the Solution:	Draft a Comprehensive Emergency Management Plan outlining responsibilities, communications, resources, vulnerable communities, assets, etc. Include familiarization of plan with local government partners and regular emergency planning exercises.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	500 year flood	Estimated Benefits (losses avoided):	Increase preparedness against storms and hazard events.
Useful Life:	5-10 years	Goals Met:	Goal 1,2 & 5
Estimated Cost:	15,000-50,000	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 12 months
Estimated Time Required for Project Implementation:	1 years	Potential Funding Sources:	HMA; Public Assistance: Hazard Mitigation Funding Under Section 406; Assistance to Firefighters Grant Program
Responsible Organization:	Town of Ulysses EMS and Fire Dept.	Local Planning Mechanisms to be Used in Implementation if any:	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Collaborate with other municipalities to develop an intermunicipal plan	Medium	Could take longer to develop and might not address all issues for Town
	Develop a municipal emergency management plan	Medium	Best alternative.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
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Action Worksheet		
Project Name:	Update and Develop Emergency Management Plan	
Project Number:	2021-T ULYSSES-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This plan is intended to protect life and property.
Property Protection	1	This plan is intended to protect life and property.
Cost-Effectiveness	1	The benefits outweigh the costs.
Technical	1	There is adequate technical expertise to execute this action.
Political	1	There is no political opposition.
Legal	1	There are no legal challenges.
Fiscal	0	There is not adequate funding.
Environmental	1	This has a positive environmental impact.
Social	1	There is no negative social impact.
Administrative	1	The administration is supportive.
Multi-Hazard	1	This addresses all hazards.
Timeline	1	This is adequate time.
Agency Champion	1	Yes
Other Community Objectives	0	Yes
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Ground Water Resource Study		
Project Number:	2021-T ULYSSES-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Drought		
Description of the Problem:	Approximately 1392 out of 2669 properties are served by private wells. Increasing frequency, duration, and severity of droughts place populations at risk of insufficient water supply or unreliable access to water.		
Action or Project Intended for Implementation			
Description of the Solution:	The second phase of this project would be to implement actions that are identified in the study and conduct a second round of grant applications to increase funding resources for projects.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		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:	NA	Estimated Benefits (losses avoided):	Provide sustained high quality water.
Useful Life:	5-10 years	Goals Met:	Goal 1 & 5
Estimated Cost:	50,000-100,000	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	With 2 – 3 years
Estimated Time Required for Project Implementation:	24 months	Potential Funding Sources:	NYS Climate Smart Communities, Clean Water Act Section 604(b) Water Quality Planning Grant
Responsible Organization:	Town Board and Planning/ USGS	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Develop an emergency water supply	Medium	The Town will have backup water supply when needed, but water instability will continue.
	Study	Medium	Best alternative
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Ground Water Resource Study	
Project Number:	2021-T ULYSSES-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project protects life and property.
Property Protection	1	This project protects life and property.
Cost-Effectiveness	1	This is cost effective.
Technical	1	The technical expertise is available as needed.
Political	1	There is no political opposition.
Legal	1	There are no legal complications.
Fiscal	-1	Alternate funding sources must be identified.
Environmental	1	This has a positive environmental impact.
Social	1	This has a positive social impact.
Administrative	0	Expert assistance will be necessary.
Multi-Hazard	0	This addresses multiple hazards.
Timeline	1	The timeline is feasible.
Agency Champion	1	Yes
Other Community Objectives	0	Yes
Total	9	
Priority (High/Med/Low)	High	

