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 Cunty at its founding in 1817. Farming has been the main industry in Lansing since it's 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: *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	Town Code	Local	Town Zoning Board of Appeals	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 meet the more general "comprehensive plan"*					

	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
*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* ****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.***					
Subdivision Regulations	Yes	Town Code	Local	Town Planning Board	No
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). https://ecode360.com/33031443* ****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.***					
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Stormwater Management Officer	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
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.* ****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.***					
Growth Management Regulation	No	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	Town 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*					

	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. • 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? • 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?	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? • 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.	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? • 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? • 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? • 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? • 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? • 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	**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. **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.	No	No	2 Years	Town of Lansing	$300, 000	Flood Mitigation	NYSDEC WQIP, FEMA FMA	High	NSP	NR
	HABs Outreach	3	HABs	**Problem**:The town of Lansing has significant exposure to	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				Cayuga Lake, and thus is vulnerable to HABs **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.										
2021 – T LANSING - 003	Living Snow Fence	3	Severe Winter Storm	**Problem**: Snow drifts create hazardous driving conditions. **Solution**: Install permanent vegetative barriers to decrease the wind strength and protect roads from potential snow drifts and whiteouts.	No	No	2 years	Town DPW	Moderate	High	Municipal Fund, HMGP	High	SIP	SP
2021 – T LANSING - 004	Farm Drought Planning	1,3	Drought	**Problem**: Increasing dry conditions are leading to higher overall vulnerability to farmers that rely on well water for their crops. **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	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	**Problem**: Severe Storms have produced powerful winds in the past that have caused trees to fall and cause power interruptions. **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.	No	No	5 years	Town DPW	Low	High	HMGP	High	NSP	PR, NR
2021 – T LANSING - 006	Repetitive Loss Property Outreach	1,2	Flood	**Problem:** High number of repetitive loss properties remain in the Town. **Solution**: Conduct pointed outreach to those remaining lakeside repetitive loss	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	**Problem:** Salmon Creek has poor water quality and has subsequent issue further downstream due to surrounding land use. See action worksheet for more information. **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.	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				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
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

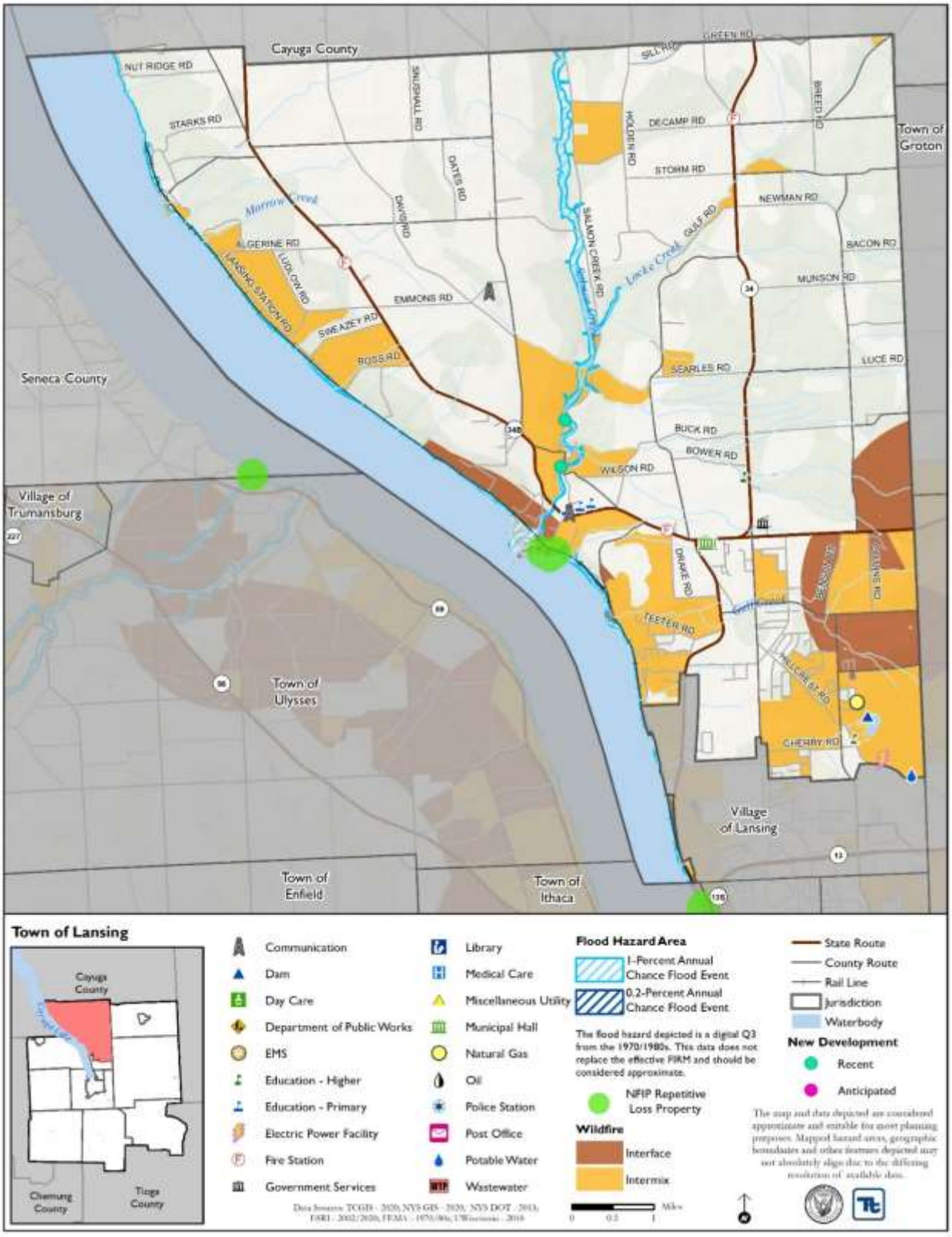
The Town of Lansing followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town departments, including: The Planning Department. The C.J. Randall represented the community 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:	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. 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		
Action or Project Intended for Implementation			
Description of the 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. 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. 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.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Is the critical facility located in the 1% annual chance flood area?	Yes ☐	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:	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 ☐	No ☒
Is the critical facility located in the 1% annual chance flood area?		Yes ☐	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:	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

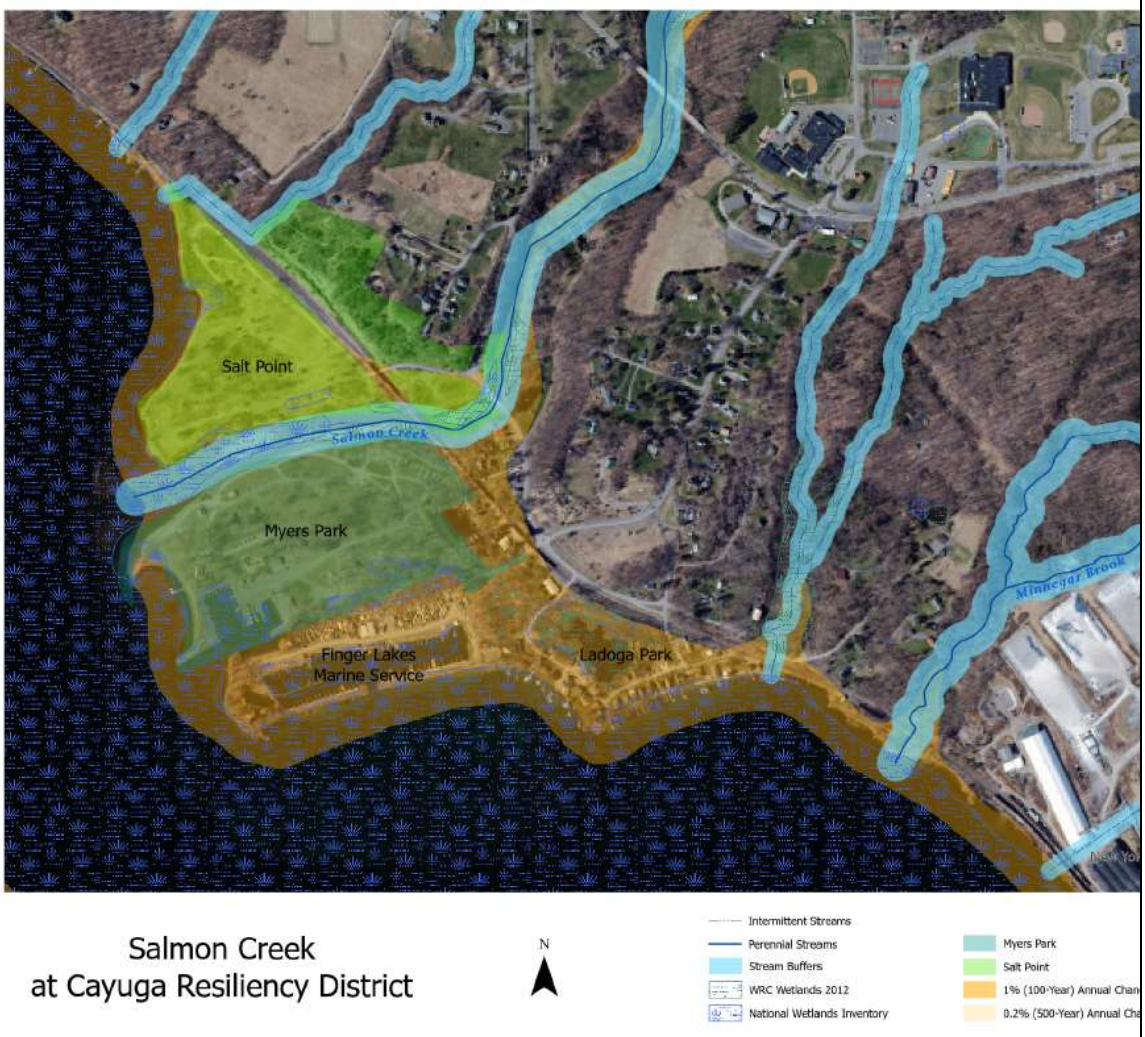
Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

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:	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. 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 washoutsand damaged stormwater infrastructure, as well as degradation and increased vulnerability of local wetlands and unique natural areas. 
Action or Project Intended for Implementation	
Description of the Solution:	This portion of Town includes Salmon Creek, Cayuga Lake, Salt Point natural area, Myers Park, the Finger Lakes Marina and Ladoga Park residential community. The majority of this part of Town is located within the Special Flood Hazard Area also has several NYSDEC regulated wetlands.  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. Resiliency measures and projects developed for this area will eventually be piloted to provide a basis for replication and implementation in other regions of the County that experience similar issues. 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: 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

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.



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 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:	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	