



9.11 TOWN OF EAST OTTO

This section presents the jurisdictional annex for the Town of East Otto. 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 municipality and who in the town participated in the planning process; an assessment of the Town of East Otto’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.

9.11.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of East Otto’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: Thomas Benz, Highway Superintendent Address: 7261 Prill Road, East Otto NY 14729 Phone Number: 716-560-5285 Email: eastottohwy@gmail.com	Name/Title: Ann Rugg, Town Supervisor Address: 9134 Bowen Road, East Otto NY 14729 Phone Number: 716-257-9182 Email: eottosupervisor@gmail.com
NFIP Floodplain Administrator	
Name/Title: Jeff Holler, Code Enforcement Officer Address: 8346 Swamp Road, Cattaraugus NY 14719 Phone Number: 716-307-3069 Email: eastottoceo@gmail.com	

9.11.2 Municipal Profile

The Town of East Otto lies in the northeast part of Cattaraugus County in western New York State. The Town of East Otto has a total area of 41.6 square miles. The town shares its northern border with Erie County, and is bordered on the east by the Town of Ashford. The Town of Ellicottville borders East Otto to the southeast, while the Town of Mansfield borders the town to the south. The Town of Otto borders the Town of East Otto to the west. There are five hamlets located within the town: Brooklyn, East Otto, Edies Siding, Plato, and Whiteford Hollow. Rainbow Lake and Timber Lake are the two largest bodies of water within the town, and East Otto Creek, Goodell Creek, Utley Brook, and South Branch Cattaraugus Creek flow through the town.

Data from the 2018 U.S. Census American Community Survey indicate the town has a total population of 1,055, with 4.4 percent of the town population 5 years of age or younger and 14.1 percent of the town population 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

History and Cultural Resources

The Town of East Otto was formed in 1854 from the Town of Otto.

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)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	7	0	3	0	3	0	4	0	2	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	7	0	3	0	3	0	4	0	2	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										
None identified										
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
None anticipated										

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.11.4 Capability Assessment

The Town of East Otto performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 6.4 (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 legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- 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 9.11.4). The Town of East Otto identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy. Appendix H provides the results of the planning/policy document review.



Planning, Legal, and Regulatory Capability

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

Table 9.11-3. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action? If yes, add Mitigation Action #.	
Codes, Ordinances, & Requirements							
Building Code	Yes	IBC 2012	Local	Code Enforcement Officer	Yes	-	-
Comment: The electric code refers to the building code.							
Zoning Code	Yes	Zoning Ordinance, 1992	Local	Building Department	No	-	-
Comment: The Town of East Otto Zoning Ordinance’s purpose is to promote the public health, safety, comfort and general welfare, conserving and protecting property and property values, securing the most appropriate use of land, minimizing flood losses in areas subject to periodic inundation, facilitating adequate but economical provision of public improvements.							
Subdivisions	Yes	Town of East Otto Subdivision Regulations, Including Design Standards	Local	Building Department	No	-	-
Comment: The purpose of the Town of East Otto Subdivision Regulations, Including Design Standards is to protect and provide for the public health, safety and general welfare of the town, to guide public and private policy, and to provide the most beneficial relationship between the uses of land and buildings.							
Stormwater Management	No	-	-	-	Yes	-	-
Comment: None							
Post-Disaster Recovery	No	-	-	-	No	-	-
Comment: None							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	-	-
Comment: None							
Growth Management	No	-	-	-	No	-	-
Comment: None							
Site Plan Review	Yes	Site Plan Review	Local	Code Enforcement Officer	Yes	-	-
Comment: None							
Environmental Protection	No	-	-	-	Yes	-	-
Comment: None							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated?	
						If no - can it be a mitigation action? If yes, add Mitigation Action #.	
Flood Damage Prevention	Yes	Flood Damage Prevention 1-1988	Local	Floodplain Administrator	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	No	2020-East Otto-001
Comment: None							
Municipal Separate Storm Sewer System (MS4)	No	-	-	-	Yes	-	-
Comment: None							
Emergency Management	No	-	-	-	Yes	-	-
Comment: None							
Climate Change	No	-	-	-	Yes	-	-
Comment: None							
Disaster Recovery Ordinance	No	-	-	-	No	-	-
Comment: None							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	-
Comment: None							
Other	No	-	-	-	-	-	-
Comment: None							
Planning Documents							
Comprehensive Plan	No	-	-	-	No	-	-
Comment: None							
Capital Improvement Plan	No	-	-	-	No	-	-
Comment: None							
Disaster Debris Management Plan	No	-	-	-	No	-	-
Comment: None							
Floodplain or Watershed Plan	No	-	-	-	No	-	-
Comment: None							
Stormwater Plan	No	-	-	-	No	-	-
Comment: None							
Open Space Plan	No	-	-	-	Yes	-	-
Comment: None							
Urban Water Management Plan	No	-	-	-	No	-	-
Comment: None							
Habitat Conservation Plan	No	-	-	-	No	-	-



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #.	
Comment: None							
Economic Development Plan	No	-	-	-	No	-	-
Comment: None							
Shoreline Management Plan	No	-	-	-	Yes	-	-
Comment: None							
Community Wildfire Protection Plan	No	-	-	-	No	-	-
Comment: None							
Forest Management Plan	No	-	-	-	No	-	-
Comment: None							
Transportation Plan	No	-	-	-	No	-	-
Comment: None							
Agriculture Plan	No	-	-	-	Yes	-	-
Comment: None							
Other (this could include a climate action plan, tourism plan, business development plan, etc.)	No	-	-	-	-	-	-
Comment: None							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	Local	Municipal	Yes	Yes	2020-East Otto-011
Comment: None							
Strategic Recovery Planning Report	No	-	-	-	-	-	-
Comment: None							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	Yes	-	-
Comment: None							
Post-Disaster Recovery Plan	No	-	-	-	No	-	-
Comment: None							
Continuity of Operations Plan	Yes	Continuity of Operations Plan	Local	OEM	No	Yes	-
Comment: None							
Public Health Plan	No	-	-	-	No	-	-
Comment: None							
Other	No	-	-	-	No	-	-



Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #.
Comment: None					

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?	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, a buildable land analysis is noted in Section 4 (County Profile)

Administrative and Technical Capability

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

Table 9.11-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
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)	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	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 Officer
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other	No	-

Fiscal Capability

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





Table 9.11-6. 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	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	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

Education and Outreach Capability

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

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 – Ann Rugg, Cattaraugus County Sheriff’s Office
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.	Yes – website, social media
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

Community Classifications

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

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)	Yes	5	4/2019
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	9	4/2019





Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

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

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). 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 does not currently have access to resources to determine the possible impacts of climate change upon the municipality but receives weekly weather bulletins from the county. The town would likely rely on the county for climate change related information.

Table 9.11-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Flood	Medium
Landslide	Medium
Severe Storm	High
Severe Winter Storm	High
Utility Interruption	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

National Flood Insurance Program

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

NFIP Floodplain Administrator (FPA)

Jeff Holler, Code Enforcement Officer

National Flood Insurance Program (NFIP) Summary

The Town of East Otto does not maintain a list of property owners interested in mitigation. No RiskMAP projects are currently underway in the town. One substantial damage determination was made in recent flood events. One property was demolished by the homeowner after flooding. The FPA feels flood maps are outdated for the town.

The following table summarizes the NFIP statistics for the Town of East Otto.





Table 9.11-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Town of East Otto	2	25	\$305,874	8

Source: NYS DHSES 2020

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2

RL Repetitive Loss

Resources

No certified floodplain managers are on the town’s staff. The FPA does not have access to resources to determine possible future flooding conditions from climate change. The town works to prevent new construction in the floodplain. Substantial improvements are identified through the guidance of the building code.

Compliance History

There are no outstanding NFIP compliance issues in the Town of East Otto. The town’s last Community Assistance Visit (CAV) took place on September 10, 2014. The town’s last Community Assistance Contact (CAC) took place on January 27, 2011.

Regulatory

The town’s flood damage prevention ordinance was last updated in 1988. The ordinance requires update. The town does not participate in the Community Rating System program.

Additional Areas of Existing Integration

- **Town website:** The Town of East Otto hosts a municipal website (<http://www.eastottony.org/>) which includes municipal information and announcements.

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

During an emergency event, the Town of East Otto relies on New York State and Cattaraugus County for evacuation decision making. The town utilizes county and state identified evacuation routes.

Sheltering

The East Otto Fire Hall is located at 8990 Reed Hill and can house 99 individuals. The location is ADA compliant, has backup power, and provides EMS-BLS medical services.

Temporary Housing

Rainbow Lake Resort is available for temporary housing. The campground has infrastructure/utilities available and has 800 sites available. The town has purchased 1-2 acres adjacent to the Town Hall for a parking lot which can also be used for temporary housing.



Permanent Housing

The town does not have suitable property for permanent housing. A buildable land analysis is noted in Section 4 (County Profile). The Town of East Otto will work with Cattaraugus County to identify regional locations for permanent housing (2020-Town of East Otto-004).

9.11.5 Hazard Event History Specific to the Town of East Otto

Cattaraugus County has a history of natural and non-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 East Otto’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Cattaraugus County. Table 9.11-11 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 9.11-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 27- November 8, 2012	Hurricane Sandy (FEMA EM-3351)	Yes	Remnants of Hurricane Sandy brought strong winds and heavy rains to western and north central New York. Rainfall amounts of two to five inches were measured across the area with some area creeks reaching bankful. The high winds downed trees and power lines throughout the region. Wind gusts were measured to 60 mph.	Although the county was impacted, Town of East Otto did not report any damages.
May 13-22, 2014	Severe Storms and Flooding (FEMA-DR-4180)	Yes	Heavy showers and embedded thunderstorms trained across the western Southern tier. Rainfall amounts of one to three inches in just a few hours resulted in flash flooding across the region. Roads and culverts were washed out. Numerous roads were water-covered and closed.	Although the county was impacted, Town of East Otto did not report any damages.
November 17-26, 2014	Severe Winter Storm, Snowstorm, and Flooding (FEMA-DR-4204)	Yes	Lake effect snow resulted in heavy snowfall across the region.	Although the county was impacted, Town of East Otto did not report any damages.
July 14, 2015	Flash Flood	No	Numerous rounds of storms along a stationary cold front resulted in flash flooding. Damaging winds occurred in some areas of the county.	The Town of East Otto reported \$105,000 in damages.
March 8, 2017	High Wind	No	A strong low pressure system brought strong and damaging winds to the entire region.	Although the county was impacted, Town of East Otto 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 Town of East Otto’s risk assessment results and data used to determine the hazard ranking.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.

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 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 East Otto. The Town of East Otto 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 East Otto indicated the following:

- The Town of East Otto changed the hazard ranking of flood from low to medium, noting that severe storms do trigger flash flooding in the town.
- The Town of East Otto agreed with the remainder of the calculated hazard rankings.

Table 9.11-12. Hazard Ranking Input

Flood*	Landslide	Severe Storm	Severe Winter Storm	Utility Failure	Wildfire
Medium	Low	High	High	High	Low

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

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





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 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 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 9.11-13. Potential Flood Losses to Critical Facilities

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

Source: Cattaraugus County 2020

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- Ongoing flood concerns: Several areas with repetitive flooding that are frequently cause for concern include:
 - Hammond Hill (Zoar Valley)
 - Utley Road
 - Swamp Road (ball diamond to Jeff’s)
 - Harvey Road (beaver dam, end by Traffic Street)
 - Additional permitting work would be necessary and cooperation of private property owner.
 - Traffic Street (big culvert)
 - Maynard Road (Mugler)
 - 4- or 5-foot culvert may be undersized.
 - Mason (bottom of hill)
 - County Road 12 (by Greens)
 - Dam failure
 - Scoby Dam:
 - Could lead to a rapid rise in Hammond Hill/Zoar Valley Area
 - There has been discussion regarding the removal of this dam
 - Timberlake Dike
 - Rainbow Lake Dike
- Culvert concerns:
 - Thompson Road
 - 2 culverts
 - Traffic Street
 - Potential study needed first. Currently 6-foot boiler pipes welded together. Seasonal Road
 - Utley Road





- Maynard Road
 - 4- or 5-foot culvert may be undersized.
- Mason Hill Road
 - Bottom of hill
- Crumb Hill
 - south of intersection
- Meyer Hill
- Bridge concerns:
 - Utley Road (County Bridge which is a preceptor to Swamp Road and contributes to issues on Swamp Road)
 - Swamp Road
- Landslides:
 - Connoisarauley
 - Hammond Hill
 - Zoar Valley area experiences significant slides
 - Snake Run
 - Steep banks are vulnerable, especially during flash flooding
 - Crumb Hill
 - Edge of ravine
 - Traffic Street
- Potential explosion risk: Multiple household propane tanks, several crop drying facilities, propane tanks, gas wells, multiple gas wells and pipelines.
- The Town of East Otto's flood damage prevention ordinance is outdated.
- Floodplain administration staff require additional training.
- The Town of East Otto needs to identify locations for the placement of permanent housing.
- The following critical facilities require backup power:
 - Highway Department
 - Highway Department's fuel pumps
 - Town Hall
- Town Hall is just outside of the floodplain, but part of the first floor is below ground level. At this time, Town Hall is the local center for gathering in emergency events.
- The Zoar Valley Area (Hammond Hill) has multiple residents, summer homes, and a business (Zoar Valley Inn) exposed to flooding. On Utley Road, a residential property by the bridge has flooded multiple times. Swamp Road is also exposed to flooding.
- Stream stabilization is needed in the Zoar Valley to prevent landslides and flood issues.
- Additional training is needed for floodplain managers and code enforcement officials.
- The town requires a sand/salt structure to protect the salt and sand supplies from exposure to precipitation and runoff into the locally protected stream. The stream is used by the NYS DEC hatchery. Relocation across the street is not currently feasible due to private property ownerships.
- The Town Hall is a designated emergency shelter. The building requires update to ensure it is capable of providing critical services. Necessary updates include:
 - Upgraded water
 - Upgraded septic
 - Backup power

9.11.7 Mitigation Strategy and Prioritization

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



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 9.11-14. 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.
There were no specific actions for the Town of East Otto in the 2014 HMP							



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of East Otto 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

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of East Otto participated in a mitigation action workshop in September 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 9.11-15 summarizes the comprehensive range of specific mitigation initiatives the Town of East Otto 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 9.11-16 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.11-15. 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
2020-East Otto-001	Flood Damage Prevention Ordinance	1, 2	Flood	<p>Problem: The Town of East Otto’s flood damage prevention ordinance is outdated.</p> <p>Solution: The town will adopt an updated flood damage prevention ordinance to maintain NFIP compliance.</p>	No	None	Within 6 months	FPA	Staff time	NFIP compliance	Town budget	High	LPR	PR
2020-East Otto-002	FPA and Code Enforcement Training	3	All Hazards	<p>Problem: Floodplain administration and code enforcement staff require additional training.</p> <p>Solution: The Code Enforcement staff, Town FPA, and staff who assist with floodplain administration will attend trainings and workshops offered by FEMA and NYS to develop additional floodplain administration and hazard mitigation skills.</p>	No	None	1 year	Administration	Staff time, potential attendance fees	Increased quality of floodplain administration	Town budget	High	LPR	PR
2020-East Otto-003	Landslide Studies	1	Landslide	<p>Problem: Numerous locations are exposed to landslide:</p> <ul style="list-style-type: none"> • Connoisarauley • Hammond Hill <ul style="list-style-type: none"> ○ Zoar Valley area experiences significant slides • Snake Run <ul style="list-style-type: none"> ○ Steep banks are vulnerable, especially during flash flooding • Crumb Hill <ul style="list-style-type: none"> ○ Edge of ravine • Traffic Street <p>Solution: The town will conduct landslide studies to determine landslide risk and potential mitigation actions. The town will carry out the identified actions that are cost-effective.</p>	No	None	Within 5 years	Administration, Engineer	TBD by landslide study	Identification of landslide risk and reduction of risk through mitigation actions	HMGP, BRIC, Town budget	High	LPR, SIP	PP
2020-East Otto-004	Identification of Permanent Housing Locations	1	All Hazards	<p>Problem: The Town of East Otto needs to identify locations for the placement of permanent housing.</p> <p>Solution: The Town of East Otto will work with Cattaraugus County to identify regional locations for permanent housing.</p>	No	None	Within 6 months	Administration	Staff time	Permanent housing locations identified	Town budget	High	LPR	ES
2020-East		1, 2		<p>Problem: Ongoing flood concerns exist in numerous areas of the Town of East Otto.</p>	No	None	Within 3 years		\$3 million	Eliminates flood damage	FEMA HMGP and	High	SIP	PP





Table 9.11-15. 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
Otto-005	Repetitive Flood Mitigation		Flood, Severe Storm	<p>The town currently has 8 repetitive loss properties. Several areas with repetitive flooding that are frequently cause for concern include:</p> <ul style="list-style-type: none"> • Hammond Hill (Zoar Valley) • Utley Road • Swamp Road (ball diamond to Jeff's) • Harvey Road (beaver dam, end by Traffic Street) <ul style="list-style-type: none"> ○ Additional permitting work would be necessary and cooperation of private property owner. • Traffic Street (big culvert) • Maynard Road (Mugler) <ul style="list-style-type: none"> ○ 4- or 5-foot culvert may be undersized. • Mason (bottom of hill) • County Road 12 (by Greens) • Dam failure <ul style="list-style-type: none"> ○ Scoby Dam: <ul style="list-style-type: none"> ▪ Could lead to a rapid rise in Hammond Hill/Zoar Valley Area ▪ There has been discussion regarding the removal of this dam <ul style="list-style-type: none"> ○ Timberlake Dike ○ Rainbow Lake Dike <p>Solution: Conduct outreach to 30 flood-prone property owners, including RL/SRL 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 flood prone areas that experience frequent flooding (high risk areas).</p>				FPA, supported by homeowners		to homes and residents, creates open space for the municipality increasing flood storage.	FMA, BRIC, local cost share by residents			



Table 9.11-15. 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
2020-East Otto-006	Backup Power for Critical Facilities	1	Utility Failure	<p>Problem: The following critical facilities require backup power:</p> <ul style="list-style-type: none"> Highway Department Highway Department's fuel pumps Town Hall <p>Solution: The Town Engineer will research what size generator is necessary to supply backup power to each facility. The town will then install a backup power generator and necessary electrical components at each facility.</p>	Yes	None	Within 5 years	Engineer, OEM, Highway	\$50,000 for Highway Department and Town Hall generators, \$10,000 for fuel pump generators	Ensures continuity of operations of critical facilities	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, EMPG, Municipal Budget	High	SIP	ES
2020-East Otto-007	Explosion and Wildfire Outreach	3	Wildfire	<p>Problem: Potential explosion risk exists in the town which could also ignite wildfire: Multiple household propane tanks, several crop drying facilities, propane tanks, gas wells, multiple gas wells and pipelines.</p> <p>Solution: The town will conduct outreach on the dangers of explosive materials and wildfire risk.</p>	No	None	Within 1 year	OEM	\$1,000	Explosion and wildfire outreach will result in reduced risk	Town budget	High	EAP	PI
2020-East Otto-008	Zoar Valley Stream Stabilization	2	Flood, Landslide	<p>Problem: Stream stabilization is needed in the Zoar Valley to prevent landslides and flood issues.</p> <p>Solution: The town will conduct the necessary stabilization measures.</p>	No	Yes, permitting likely required	Within 5 years	Administration	\$75,000	Landslide and flood risk reduced	HMGP, town budget	High	NSP	NR
2020-East Otto-009	Town Hall Upgrades to Support Sheltering	1	All Hazards	<p>Problem: The Town Hall is a designated emergency shelter. The building requires update to ensure it is capable of providing critical services. Necessary updates include:</p> <ul style="list-style-type: none"> Upgraded water Upgraded septic Backup power <p>Solution: The town will complete the necessary upgrades to allow for support of sheltering.</p>	Yes	None	Within 5 years	Administration	\$125,000	Sheltering capabilities increased	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, EMPG, Municipal Budget	High	SIP	ES



Table 9.11-15. 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
2020-East Otto-010	Salt and Sand Barn	1, 2	Severe Storm, Severe Winter Storm	Problem: The Town of East Otto requires a sand/salt structure to protect the salt and sand supplies from exposure to precipitation and runoff into the locally protected stream. The stream is used by the NYS DEC hatchery. Relocation across the street is not currently feasible due to private property ownerships.	No	None	Within 5 years	Highway	\$50,000	Winter storm response capabilities increased, savings from lost sand and salt, stream protection	FEMA HMGP, BRIC, WQIP, USDA Community Facilities Grant Program, Municipal Budget	High	SIP	ES
				Solution: The town will construct a salt sand barn with a structurally sound and weather-proof structure to protect the town salt and sand supply for winter storm response. The Highway Department will be responsible for construction.										
2020-East Otto-011	Emergency Operations Plan Update	1, 2, 3	All Hazards	Problem: The Emergency Operations Plan requires update.	Yes	None	Within 1 year	OEM	Staff time	EOP updated and integrated with HMP	Town budget	High	LPR	ES
				Solution: The town will update the Emergency Operations Plan, using information collected during the hazard mitigation plan update.										

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 9.11-16. 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
2020-East Otto-001	Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2020-East Otto-002	FPA and Code Enforcement Training	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-East Otto-003	Landslide Studies	1	1	1	0	1	1	0	1	1	1	0	0	1	1	10	High
2020-East Otto-004	Identification of Permanent Housing Locations	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-East Otto-005	Repetitive Flood Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-East Otto-006	Backup Power for Critical Facilities	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High
2020-East Otto-007	Explosion and Wildfire Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2020-East Otto-008	Zoar Valley Stream Stabilization	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2020-East Otto-009	Town Hall Upgrades to Support Sheltering	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High
2020-East Otto-010	Salt and Sand Barn	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2020-East Otto-011	Emergency Operations Plan Update	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	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 9.11-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Flood	X	X	X		X	X		X		X
Landslide	X	X	X		X	X		X		X
Severe Storm	X	X			X	X				X
Severe Winter Storm	X	X			X					X
Utility Interruption	X	X			X					X
Wildfire	X	X		X	X		X			X

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 Town of East Otto 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 departments, including: Highway Superintendent, Town Supervisor, and Code Enforcement Officer. The Highway Superintendent represented the community on the Cattaraugus County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

9.11.10 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Town of East Otto that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. The maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of East Otto has significant exposure. These maps are illustrated below.



Figure 9.11-1. Town of East Otto Hazard Area Extent and Location Map 1

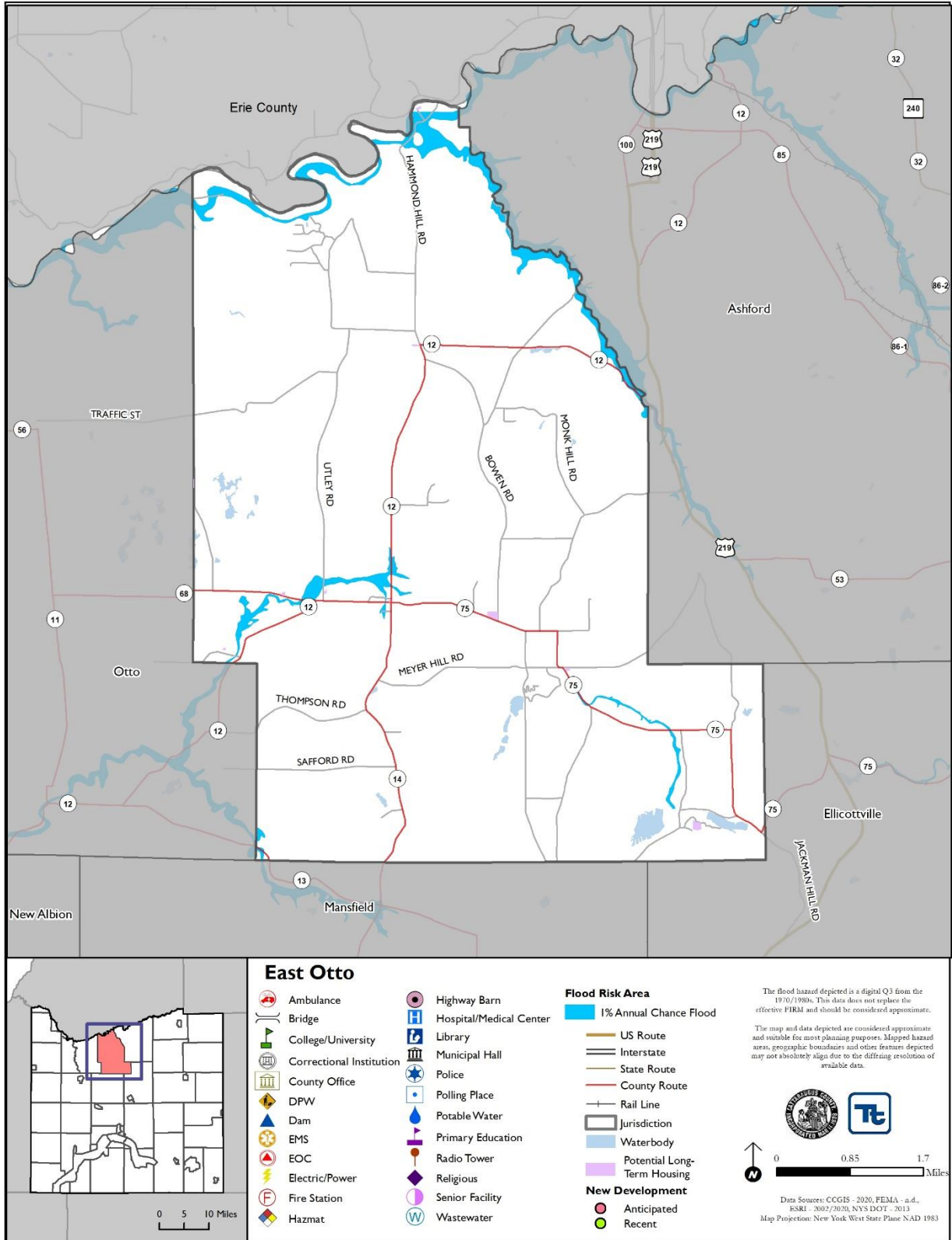
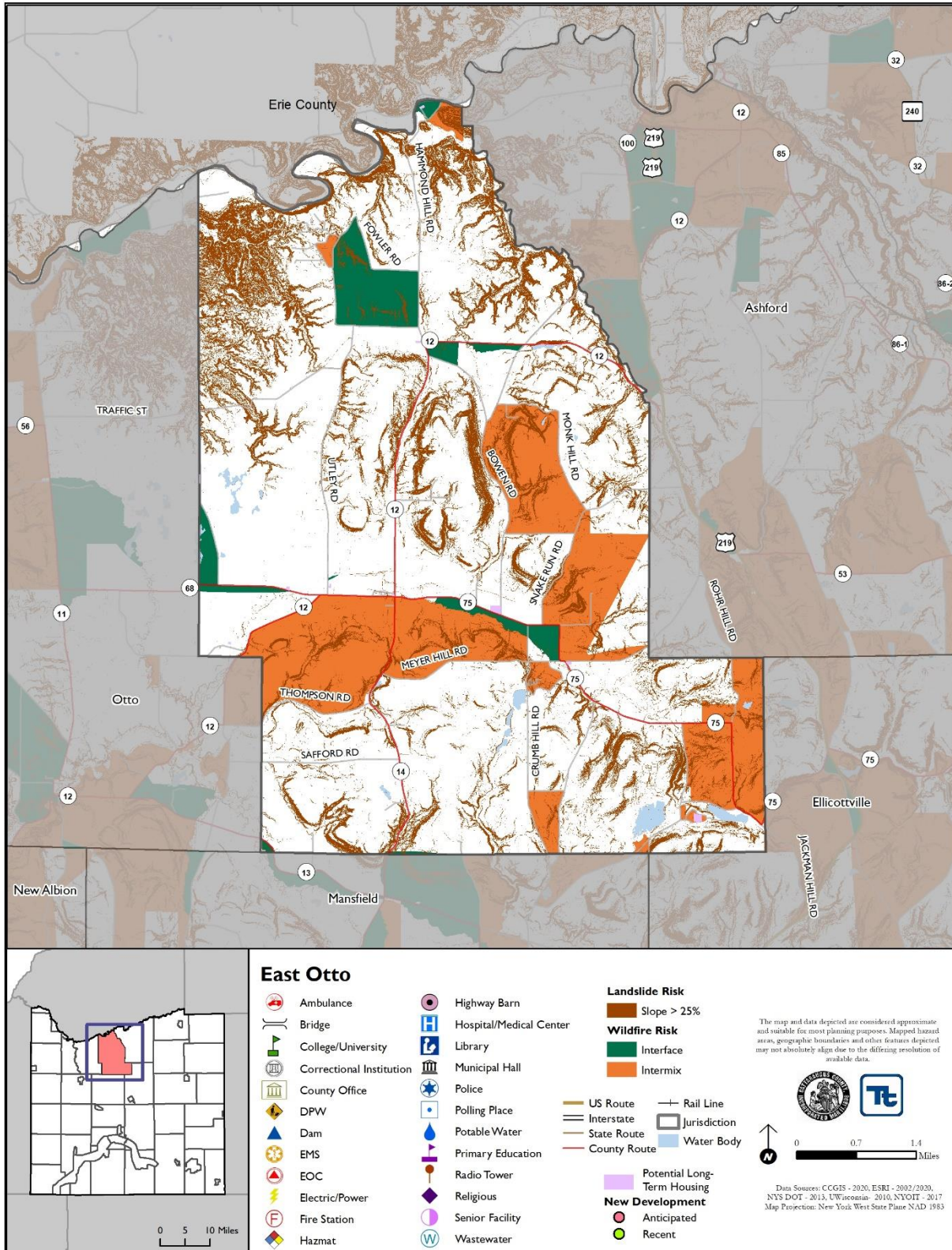




Figure 9.11-2. Town of East Otto Hazard Area Extent and Location Map 2





Action Worksheet			
Project Name:	Repetitive Flood Mitigation		
Project Number:	2020-East Otto-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	<p>Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town of East Otto currently has 8 repetitive loss properties. Several areas with repetitive flooding that are frequently cause for concern include:</p> <ul style="list-style-type: none"> • Hammond Hill (Zoar Valley) • Utlely Road • Swamp Road (ball diamond to Jeff's) • Harvey Road (beaver dam, end by Traffic Street) <ul style="list-style-type: none"> ○ Additional permitting work would be necessary and cooperation of private property owner. • Traffic Street (big culvert) • Maynard Road (Mugler) <ul style="list-style-type: none"> ○ 4 or 5 foot culvert may be undersized. • Mason (bottom of hill) • County Road 12 (by Greens) • Dam failure <ul style="list-style-type: none"> ○ Scoby Dam: <ul style="list-style-type: none"> ▪ Could lead to a rapid rise in Hammond Hill/Zoar Valley Area ▪ There has been discussion regarding the removal of this dam • Timberlake Dike • Rainbow Lake Dike 		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct outreach to 30 flood-prone property owners, including RL/SRL 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 flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the Special Flood Hazard Area?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	Goals Met:	1, 2
Estimated Cost:	\$3Million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP and FMA, BRIC, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	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





	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Repetitive Flood Mitigation	
Project Number:	2020-East Otto-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The town has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the town.
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Backup Power for Critical Facilities		
Project Number:	2020-East Otto-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Failure		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The following critical facilities require backup power: <ul style="list-style-type: none"> • Highway Department • Highway Department's fuel pumps • Town Hall 		
Action or Project Intended for Implementation			
Description of the Solution:	The Town Engineer will research what size generator is necessary to supply backup power to each facility. The town will then install a backup power generator and necessary electrical components at each facility		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the Special Flood Hazard 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:	N/A	Estimated Benefits (losses avoided):	Ensures continuity of operations of critical facilities
Useful Life:	20 years	Goals Met:	1
Estimated Cost:	\$50,000 for Highway Department and Town Hall generators, \$10,000 for fuel pump generators	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, OEM, Highway	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
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 Critical Facilities	
Project Number:	2020-East Otto-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of critical facilities
Property Protection	1	Project will protect critical facilities from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Utility Failure
Timeline	1	1 year
Agency Champion	1	Engineer, OEM, Highway
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Zoar Valley Stream Stabilization		
Project Number:	2020-East Otto-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Landslide		
Description of the Problem:	Stream stabilization is needed in the Zoar Valley to prevent landslides and flood issues.		
Action or Project Intended for Implementation			
Description of the Solution:	The town will conduct a feasibility assessment and implement the necessary stabilization measures.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Landslide and flood risk reduced
Useful Life:	1 year	Goals Met:	1
Estimated Cost:	\$75,000	Mitigation Action Type:	Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, town budget
Responsible Organization:	Administration	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	Problem continues.
	Retreat from areas near stream	High	Costly, unpopular
	Levees along stream	High	Not feasible/environmentally damaging, costly
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Zoar Valley Stream Stabilization	
Project Number:	2020-East Otto-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect properties from falling tree damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	Permitting likely required
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Landslide
Timeline	0	
Agency Champion	1	Administration
Other Community Objectives	1	Restore natural floodplain function
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Town Hall Upgrades to Support Sheltering		
Project Number:	2020-East Otto-009		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Town Hall is a designated emergency shelter. The building requires update to ensure it is capable of providing critical services. Necessary updates include: <ul style="list-style-type: none"> • Upgraded water • Upgraded septic • Backup power 		
Action or Project Intended for Implementation			
Description of the Solution:	The town will complete the necessary upgrades to allow for support of sheltering.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	Emergency shelter requirements	Estimated Benefits (losses avoided):	Sheltering capabilities increased
Useful Life:	15 years	Goals Met:	2
Estimated Cost:	\$125,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, EMPG, Municipal Budget
Responsible Organization:	Administration	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, emergency management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Purchase multi-use trailers	\$1M per trailer	Require deployment, limited space
	Build separate hospital	High	Costly, need to be staffed
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 Upgrades to Support Sheltering	
Project Number:	2020-East Otto-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides sheltering
Property Protection	1	Project will strengthen building protections
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The town has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	Administration
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Salt and Sand Barn		
Project Number:	2020-East Otto-010		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Winter Storm		
Description of the Problem:	The Town requires a sand/salt structure to protect the salt and sand supplies from exposure to precipitation and runoff into the locally protected stream. The stream is used by the NYS DEC hatchery. Relocation across the street is not currently feasible due to private property ownerships.		
Action or Project Intended for Implementation			
Description of the Solution:	The Town will construct a salt sand barn with a structurally sound and weather-proof structure to protect the Town salt and sand supply for winter storm response. The Highway Department will be responsible for construction.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the Special Flood Hazard Area?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	Structure to meet building code	Estimated Benefits (losses avoided):	Continuity of road clearing services in winter, reduction in runoff
Useful Life:	50 years	Goals Met:	1, 2
Estimated Cost:	\$50,000	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	FEMA HMGP, BRIC, WQIP, USDA Community Facilities Grant Program, Municipal Budget
Responsible Organization:	Highway Department	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvements, Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Hire contractor for roadway treatment	Variable based on rate and number of applications per year; assumed at \$600 per mile	Costly, most contractors are too small to service the entire Town
	Contract with Town of Brookhaven for roadway treatment	Variable based on rate and number of applications per year; assumed at \$600 per mile	Costly
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Evaluation and Prioritization		
Project Name:	Salt and Sand Barn	
Project Number:	2020-East Otto-010	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects continuity of services to keep roadways clear for safe travel and emergency response.
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	The project is technically sound
Political	1	There is public support for the project
Legal	1	The Town has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	Project will reduce chance of runoff and groundwater contamination
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Winter Storm, Nor'Easter, Groundwater Contamination
Timeline	1	Within 2 years
Agency Champion	1	Highway Department
Other Community Objectives	1	Continuity of critical services
Total	12	
Priority (High/Med/Low)	High	