

Jurisdictional Annex

Town of Eaton

1. Contacts

The contacts for the Town of Eaton regarding this plan are identified as follows:

- Larry Phillips – Highway Superintendent
Address: 35 Cedar Street, P.O. Box 66, Morrisville, NY 13408
Phone: (315) 684-3118
Email: lphillips75@frontier.com
- Cliff Moses – Supervisor
Address: 35 Cedar Street, P.O. Box 66, Morrisville, NY 13408
Phone: (315) 684-9110
Email: cmoses1951@aol.com

Town Website: <http://www.townofeaton.com/>

2. Municipal Profile

2.1 Population

The 2020 Census estimated that 4,284 people live in the Town of Eaton. The Town's population has decreased by 18.4% since the 2010 Census (5,255) (U.S. Census Bureau, 2020). The median age in the Town is 27 years and 14.7% of the population is over the age of 65. The Town covers approximately 45.6 square miles. The Town has an equalized assessed value of approximately 268 million dollars spread across a variety of property classes.

2.2 Location

The Town of Eaton is located in central Madison County and is bordered by the Towns of Smithfield and Stockbridge to the north, the Town of Madison to the east, the Town of Lebanon to the south, and the Town of Nelson to the west. Major transportation routes in the Town of Eaton include U.S. Route 20 and State Routes 26, 46, and 12B. Population centers in the Town include the Village

of Morrisville and hamlets of Pierceville, Pine Woods, Pratts, and West Eaton. The Town of Eaton is shown in Figure 1 (Attachment A).

2.3 Governing Body

The Town of Eaton is governed by a five-member Town Board, which includes the Supervisor and four councilors.

2.4 Recent and Anticipated Future Development

Since the last County HMP (2017), a County Highway Department building was constructed on Brown Road, a car dealership was developed on State Route 12B, and a Community Park is planned on Eaton Street (construction anticipated for 2023). Morrisville State College also constructed a new electrical facility, a 5G tower, and a solar farm on campus. No new development has occurred in the Special Flood Hazard Area, and the reported developments have not changed the Town's vulnerability to natural hazards.

3. Capability Assessment

3.1 Planning and Regulatory Capability

The Town has considered the 2017 HMP when implementing their existing plans and regulations and progressing projects. The Town's HMP update will be incorporated into and referenced by future updates of the plans, policies, ordinances, programs, studies, and reports listed in Table 1, below.

Table 1. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Eaton	Notes
Administration		
Maintenance Programs	Yes	
Mitigation Planning Committee	Yes	
Mutual Aid or Shared Services Agreements	Yes	
Planning Board	Yes	
Zoning Board	Yes	
Development Approvals		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Evaluation	No	
Fire Department ISO Rating	Yes	Morrisville Fire Dept., Eaton Fire Dept.
Site Plan Review Requirements	Yes	
Special Use Permits	Yes	

Table 1. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Eaton	Notes
Funding Resources		
Authority to Levy Taxes	Yes	
Capital Improvement Project Funds	Yes	
Federal Funding Programs (i.e., USDA, FEMA, others)	Yes	
General Obligation Bonds and/or Special Tax Bonds	Yes	
Impact Fees for New Development	Yes	Pipelines bond prior to development
State Funding Programs (i.e., NYSEFC, NYSOCR, NYSDEC, others)	Yes	
Utility Fees (i.e., water, sewer, stormwater, gas, electric)	Yes	Road bore permits, gas/communication line permits
Land Use Regulations		
Density Controls	No	
Flood Insurance Rate Maps	Yes	
Floodplain Ordinance	Yes	
Hillside Development Regulations	No	
Open Space Preservation	No	
Stormwater Management Regulations	Yes	State Regulations Apply
Streambank Setback Regulations	Yes	State Health dept. rules for septic
Subdivision Regulations	Yes	
Transfer of Development Rights	Yes	State and Federal Programs available for agriculture
Zoning Ordinance	Yes	
Natural Resources		
Forest/Vegetation Management	Yes	NYSDEC 480A program available
Stream Corridor Management	No	
Stream Dumping Regulations	Yes	State regulations apply
Urban Forestry and Landscape Management	No	
Watershed Management	Yes	Chesapeake Bay Tributary Strategy
Wetland Regulations	Yes	State and Federal rules apply
Plans		
Capital Improvement Plan	No	
Comprehensive Emergency Management Plan	No	County has this plan in place
Comprehensive Plan	Yes	2019
Continuity of Operations Plan	No	County has this plan in place
Economic Development Plan	No	
Other Plans (specify)	Yes	Adopted Public Health Plan in response to COVID-19 pandemic (required by NYS)
Programs/Organizations		
Climate Smart Community	Yes	
Local Emergency Preparedness/Disaster Response Organizations	Yes	Morrisville Fire Dept. and Eaton Fire Dept., SEVAC

Table 1. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Eaton	Notes
Local Environmental Protection Organizations	No	
National Weather Service StormReady Certification	No	County is certified
Outreach Programs	Yes	Education of Elected to NIMS Standards
Partnerships with private entities addressing mitigation or disaster response	No	
School Programs or Adult Educational Programs	Yes	Fire Safety Education Head Start
Staff Positions		
Civil Engineer	No	
Code Enforcement Officer	Yes	
Emergency Manager	Yes	
Floodplain Administrator	Yes	Code Enforcement Officer
Planner/GIS Coordinator	No	County assists
Technical Abilities		
Grant Writing	No	
Hazard Information Centers	No	
Hazard Warning Systems	Yes	

3.2 Emergency Communications, Routes, and Shelters

The Town of Eaton is covered by Madison County's emergency notification system. Major transportation routes within the Town include U.S. Route 20 and State Routes 26, 46, and 12B. The Town's emergency shelter location is detailed in Table 2, below.

Table 2. Emergency Shelters						
Facility	Address	Owner/ Occupant	Support medical needs?	ADA Compliant?	Pets accepted?	Notes
Edward R. Andrews Elementary School	55 Eaton St, Morrisville, NY 13408	Morrisville-Eaton Central School District	Yes	Yes	No	No backup power available; designated Red Cross shelter with a capacity of 160 people.

3.3 Temporary and Permanent Housing Locations

The potential temporary and permanent housing locations listed below were identified for displaced residents in the Town of Eaton based on the 2017 NYS Hazard Mitigation Planning Standards. It is noted that formal agreements would need to be established in order to use privately owned properties.

- **Potential Temporary Housing Locations**
 - Elementary School parking areas/fields- 55 Eaton St, Morrisville, NY 13408
 - High School parking areas/fields (located in Town of Smithfield) - 5061 Fearon Rd, Morrisville, NY 13408
 - Open space at Morrisville State College- 80 Eaton St, Morrisville, NY 13408
- **Potential Permanent Housing Locations**
 - Privately owned vacant land throughout Town (coordination required with landowners for potential property purchase or subdivisions)

4. Hazard Vulnerabilities and Ranking

4.1 Risk Assessment

The Town reviewed multiple natural hazards to include in the HMP update. The hazard analysis criteria is summarized in Table 3. The Town's natural hazard analysis results are provided in Table 4.

Table 3. Hazard Analysis Criteria						
Score	Extent	Onset	Impact	Frequency	Total Score	Overall Vulnerability
1	One location	Days of warning	Minor damages/injuries	Rare	4 to 5	Low
2	Several locations	Hours of warning	Moderate damages/injuries	Infrequent	6 to 8	Moderate
3	Large area	No warning	Severe damages/injuries	Regular	9 to 12	High

Table 4. Natural Hazard Vulnerability and Risk Assessment						
Hazard Event	Extent	Onset	Impact (Damages and Injury)	Frequency	Total Score and Overall Vulnerability	Jurisdiction Rank
Severe Thunderstorm/Wind/Hail	3	2	3	3	11 - High	1
Severe Winter Storm	3	2	3	3	11 - High	2
Flood	2	2	2	3	10 - High	3
Tornado	1	3	3	1	8 - Moderate	4
Extreme Temperatures	3	1	2	2	8 - Moderate	5
Earthquake	2	3	2	1	8 - Moderate	6
Wildfire	2	3	2	1	8 - Moderate	7
Landslide	2	3	1	1	7 - Moderate	8
Drought	3	1	1	1	6 - Moderate	9
Ice Storm	1	1	1	1	4 - Low	10
Ice Jam	1	1	1	1	4 - Low	11

4.2 Critical Facilities

Critical facilities include any facility that is critical for emergency response or that requires special emergency response in the event of hazardous incidents as identified by the Town of Eaton. Table 5, below, denotes the types and locations of critical facilities within the Town. Table 5 only reports critical facilities within the Town's jurisdictional limits; Town facilities located within the Village of Morrisville are reported in the Village's annex. The Town's Critical Facilities are also shown on Figure 1 (Attachment A).

Table 5. Critical Infrastructure in the Town of Eaton		
Facility Name	Address	Located in Floodplain
Boat Launch	4892 Route 26	No
Cell Tower	1100 Crow Hill Rd	No
Cell Tower	4748 Route 20	No
Cell Tower	Wilcox Rd	No
County Radio Tower Site 15	3747 Clark Rd	No
Eaton Fire Dept.	2631 Mechanic St	No
Electrical Substation	5782 Mill St	100-year
Electrical Substation	2500 River Rd	No
Electrical Substation	Davis Corners Rd	No
Madison County Highway Garage and Sheriff's Field Office	6200 Brown Rd	No
Natural Gas Metering Station	2511 Lebanon Hill Rd	No
NYSEG Natural Gas Facility	3420 South St	No
SUNY Morrisville Dairy Complex	South St	No
Water Storage Tank	Reservoir Rd	No
West Eaton Fire Dept.	3343 Route 26	No
Wind Farm	Crow Hill Rd	No

5. Priority Hazard Events

The following sections detail the priority hazard events identified by the jurisdiction. Additional information about each hazard including frequency, history, and severity within Madison County is included within Section 5.0 of the main body of the Hazard Mitigation Plan. Historical tornado and earthquake records are reported for the last ten years (2012-2022). All other hazard profiles report events that have occurred in the last five years (2017-2022).

The probability of climate-related hazard events is expected to increase in the future within the Town of Eaton. Climate change is expected to cause an increase in weather volatility, rising sea level, and greater temperature extremes.

Past occurrences of hazard events are indicated in their respective profiles below. Some hazards do not have historic records, but they were profiled for future mitigation planning consideration.

5.1 Severe Thunderstorm, Windstorm, or Hail

5.1.1 *Description*

For a description of these hazards, please see Section 5.1 of the main body of the plan.

5.1.2 *Hazard Vulnerability*

The Town's overall vulnerability for a severe thunderstorm, windstorm, or hail event is high, as documented in their hazard analysis in Section 4.1. The entire Town is susceptible to damages from a severe thunderstorm, windstorm, or hail event. Fallen trees from severe winds can damage overhead utility lines, resulting in power outages. In addition, these events are likely to result in damages to private and public infrastructure and property. Damages to the Town's critical infrastructure or primary transportation routes (U.S. Route 20 and State Routes 26, 46, and 12B) would be most impactful to residents. Storm damages would primarily impact the more populated portions of the Town, including the Village of Morrisville and hamlets of Pierceville, Pine Woods, Pratts, and West Eaton.

5.1.3 Historical Hazard Occurrences and Damage Estimates

The NCDC reported two severe storm events that occurred in the Town of Eaton within the past five years. Estimated damages for the Town of Eaton were \$2,500 per event (Table 6). Actual damages were likely greater than those estimated by the NCDC.

Table 6. Severe Storm Event Records for the Town of Eaton				
Event Type	Date	Magnitude	Estimated Property Damage	Estimated Crop Damage
Thunderstorm Wind	7/22/2022	50 knots	\$2,500.00	-
Thunderstorm Wind	7/22/2022	50 knots	\$2,500.00	-
Total			\$5,000.00	None reported

5.1.4 Future Potential Impacts

The Town's overall vulnerability to this hazard will remain high in the future. The frequency and magnitude of severe storm events may increase due to climate change.

5.2 Severe Winter Storm

5.2.1 Description

For a description of this hazard, please see Section 5.3 of the main body of the plan.

5.2.2 Hazard Vulnerability

The Town's overall vulnerability for a severe winter storm is high, as documented in their hazard analysis in Section 4.1. The entire Town of Eaton is susceptible to damages from a severe winter storm event. The Town Highway Department clears local roads during heavy snow events, and the Town works with the Madison County Highway Department and NYS Department of Transportation for clearing of other roadways. Roadway safety is a major concern during severe winter storm events. Damages to the Town's critical infrastructure or primary transportation routes (U.S. Route 20 and State Routes 26, 46, and 12B) would be most impactful to Town residents. Storm damages would primarily impact the more populated portions of the

Town, including the Village of Morrisville and hamlets of Pierceville, Pine Woods, Pratts, and West Eaton.

5.2.3 *Historical Hazard Occurrences and Damage Estimates*

The Town of Eaton has been affected by a number of severe winter storm events reported for Madison County, which are described in Section 5.3 of the main body of the plan. The NCDC does not report any winter storm damage estimates specific to the Town of Eaton.

5.2.4 *Future Potential Impacts*

The Town's overall vulnerability to severe winter storms will remain high in the future. The severity and frequency of severe winter storms may increase due to climate change.

5.3 **Flood**

5.3.1 *Description*

For a description of this hazard, please see Section 5.2 of the main body of the plan.

5.3.2 *Hazard Vulnerability*

The Town's overall vulnerability for a flood is high, as documented in their hazard analysis in Section 4.1. The Town is drained by the Chenango River, Callahan Brook, Eaton Brook and their tributaries. Eaton Reservoir, Hatch Lake, and Bradley Brook Reservoir are located in the southwestern corner of the Town. FEMA provides flood insurance rate maps for the Town of Eaton. The 100-year floodplain corresponds with areas that are at high risk for flooding (1% likely to flood any given year), and areas within a 500-year floodplain are at moderate flood risk (0.2% likely to flood in any given year). Figure 1 (Attachment A) shows FEMA mapped floodplains within the Town. Table 7 summarizes the amount of land within the Town of Eaton that is located within mapped floodplains. An electrical substation on Mill Street is located in the mapped 100-year floodplain.

Table 7. Summary of Areas in Floodplains (Source: FEMA Q3 Digital Floodplain Data, 1996)		
Town of Eaton Total Area	Percent of Total Area	
	100-Year Floodplain	500-Year Floodplain
28,224 acres	5.3%	0%

5.3.3 Historical Hazard Occurrences and Damage Estimates

According to the NCDC, in the past five years, two flood records were noted to specifically impact the Town of Eaton. One event on July 1, 2017 involved widespread flash flooding of creeks and urbanized areas throughout the Town of Eaton. Culverts and roads were washed out in several places, and some residences experienced flooding. The damage estimate for this event was \$340,000. Another event on August 22, 2021 was caused by heavy rains from Hurricane Henri. The damage estimate for this event was \$5,000. Additionally, the Town reports four dams in need of repair within the Town. The Town also reports past flooding and erosion issues on Gulch Road, Roberts Road, Westcott Road, and Williams Corners. These issues have been mitigated for now; however, there is increasing water on these roads as stream flows change. The Town has not experienced flood damages at the electrical substation on Mill Street located in the mapped 100-year floodplain. As described in Section 6.0 of this annex, NFIP loss claims data were requested from FEMA and a response is pending. According to the County's 2017 HMP, there are no repetitive loss properties in the Town.

5.3.4 Future Potential Impacts

The Town's overall vulnerability to flooding remains high. Properties along the Eaton Reservoir, Hatch Lake, the Bradley Brook Reservoir, and streams throughout the Town remain vulnerable to flooding in the future. The Town proposed three flood-related mitigation actions as part of the HMP update, all culvert upgrade projects on Roberts Road, Gulch Road, and Westcott Road. Once implemented, these projects will reduce flood risk along these roadways. The frequency and magnitude of flood events may increase due to climate change.

5.4 Tornado

5.4.1 *Description*

For a description of this hazard, please see Section 5.8 of the main body of the plan.

5.4.2 *Hazard Vulnerability*

The Town's overall vulnerability for a tornado is moderate, as documented in their hazard analysis in Section 4.1. The entire Town of Eaton is susceptible to damages from a tornado. The Town of Eaton is located in the southern portion of Madison County, which is very hilly. Tornadoes often touch down along topographic high points in this region and affect more localized areas at one time, rather than longer swaths of damage experienced in flatter areas. Even if only a small area is affected, a tornado could result in severe damage to homes, over-turned automobiles and leveling of utility lines.

5.4.3 *Historical Hazard Occurrences and Damage Estimates*

Three tornadoes have occurred in Madison County within the past ten years, but the NCDC does not report any specific tornado events that occurred in the Town of Eaton. There are no damage estimates specific for the Town related to tornadoes.

5.4.4 *Future Potential Impacts*

The Town's overall vulnerability to tornadoes will remain moderate in the future. Damages from a tornado event can be devastating, and the frequency and magnitude of tornado events may increase due to climate change.

5.5 Extreme Temperatures

5.5.1 *Description*

For a description of this hazard, please see Section 5.6 of the main body of the plan.

5.5.2 Hazard Vulnerability

The Town's overall vulnerability for an extreme temperature event is moderate, as documented in their hazard analysis in Section 4.1. Extreme temperatures typically affect most or all of the County, and the entire Town of Eaton is susceptible to this hazard. Extreme temperature events tend to have greater impacts on vulnerable populations, including older adults (over 65 years), young children (under 5 years), people with health problems, or people who cannot afford to sufficiently heat or cool their homes. Approximately 4.2% of the population in the Town is under 5 years old, and 14.7% of the population is over 65 years old. Approximately 10.2% of the Town's population is below the poverty level. These populations are at a higher risk of being impacted by extreme temperature events.

5.5.3 Historical Hazard Occurrences and Damage Estimates

The NCDC reports three extreme temperatures in Madison County within the past five years, which affected the entire County. Each of these events was an extreme cold/wind chill event. Details of these events are described in Section 5.5 of the main body of the plan. No damage estimates related to extreme temperatures are reported specific to the Town of Eaton.

5.5.4 Future Potential Impacts

The Town of Eaton's overall vulnerability to extreme temperatures remains moderate. The County Highway facility on Brown Road could be used as a warming or cooling center for residents that may not have adequate heat or air conditioning in their homes. Extreme temperatures are likely to increase in frequency and extremity in the future due to climate change.

5.6 Earthquake

5.6.1 Description

For a description of this hazard, please see Section 5.5 of the main body of the plan.

5.6.2 Hazard Vulnerability

The Town's overall vulnerability for an earthquake is high, as documented in their hazard analysis in Section 4.1. According to Figure 5.8 (provided in Appendix A of the main plan), the Town has a PGA Hazard rating of 8-10%. An earthquake could impact any location within the Town, though historically, the Town has not experienced significant earthquake damages. Earthquakes that damage the Town's critical infrastructure or emergency evacuation routes would result in the most significant impacts to the Town and its residents.

5.6.3 Historical Hazard Occurrences and Damage Estimates

According to the USGS Earthquake Catalog, there are no historical records of earthquakes occurring specifically in the Town of Eaton. An earthquake has the potential to cause hundreds of thousands of dollars in damages.

5.6.4 Future Potential Impacts

The Town's overall vulnerability to earthquakes remains moderate. The Town is within an area of light seismic activity. The Town is not likely to experience significant earthquake damages.

5.7 Wildfire

5.7.1 Description

For a description of this hazard, please see Section 5.10 of the main body of the plan.

5.7.2 Hazard Vulnerability

The Town's overall vulnerability for a wildfire is moderate, as documented in their hazard analysis in Section 4.1. Undeveloped lands such as forest and open fields and brush lands within the Town are susceptible to wildfires. The majority of the Town consists of forested and open agricultural land.

5.7.3 *Historical Hazard Occurrences and Damage Estimates*

According to Figure 5.14 (Appendix A of the main body of the plan), the Town of Eaton experienced 0.9 to 1.3 wildfires per square mile from 2003 to 2017 according to reports from the NYSDEC. A wildfire has the potential to cause hundreds of thousands of dollars in damages.

5.7.4 *Future Potential Impacts*

The Town's overall vulnerability to a wildfire remains moderate. A large portion of the Town consists of undeveloped land. However, a wildfire is unlikely to cause significant damages to developed properties and critical infrastructure given the rural nature of the Town. Wildfires are likely to increase in frequency and magnitude in the future due to climate change.

5.8 Landslide

5.8.1 *Description*

For a description of this hazard, please see Section 5.11 of the main body of the plan.

5.8.2 *Hazard Vulnerability*

The Town's overall vulnerability for landslide is moderate, as documented in their hazard analysis in Section 4.1. The Town of Eaton is mapped as an area of low incidence for landslides (Figure 5.6, Appendix A of the main body of the plan). Areas with steep slopes throughout the Town (based on mapped soil units with slopes over 30%) are shown in Figure 1 (Attachment A). Areas with steep slopes or areas subject to erosion due to flooding along streams (Chenango River, Callahan Brook, and Eaton Brook) are more vulnerable to landslides.

5.8.3 *Historical Hazard Occurrences and Damage Estimates*

The Town has experienced landslide issues along Westcott Road and Cramer Road, which have caused bank instability. Landslides along Westcott Road, which borders Hatch Lake and the Bradley Brook Reservoir, occurred in 2021

associated with flooding. A landslide has the potential to cause hundreds of thousands of dollars in damages.

5.8.4 Future Potential Impacts

The Town's overall vulnerability to landslides remains moderate. Landslides typically occur on hilly or mountainous landscapes, and are also common in river valleys. They are most likely to occur in areas where they have occurred in the past. Areas with steep slopes in the Town, including areas along the Chenango River, Callahan Brook, and Eaton Brook, and areas Westcott Road and Cramer Road are susceptible to landslides in the future.

5.9 Drought

5.9.1 Description

For a description of this hazard, please see Section 5.9 of the main body of the plan.

5.9.2 Hazard Vulnerability

The Town's overall vulnerability for drought is moderate, as documented in their hazard analysis in Section 4.1. Agricultural areas and properties served by private wells would experience the most significant impacts. Agricultural lands are spread throughout the entire Town. There is no municipal water service in the Town. Residents rely on private wells, which can be susceptible to low water yields during a drought.

5.9.3 Historical Hazard Occurrences and Damage Estimates

The NCDC reports no specific drought events for the Town of Eaton. The Town also did not note any local records of past droughts.

5.9.4 Future Potential Impacts

The Town's overall vulnerability to a drought remains moderate. Agricultural properties would experience the most significant impacts related to a drought. Drought events are likely to increase in frequency and magnitude in the future due to climate change.

5.10 Ice Storm

5.10.1 *Description*

For a description of this hazard, please see Section 5.7 of the main body of the plan.

5.10.2 *Hazard Vulnerability*

The Town's overall vulnerability for an ice storm is low, as documented in their hazard analysis in Section 4.1. The entire Town of Eaton is susceptible to damages from an ice storm event. The Town Highway Department completes tree maintenance within Town road right of ways to minimize potential damages to overhead utility lines, which is common during ice storms. Private utility right of ways are generally maintained by the individual utility companies.

5.10.3 *Historical Hazard Occurrences and Damage Estimates*

The NCDC reports one ice storm in Madison County within the past five years, which was reported for the entire County. The reported ice storm occurred on February 10, 2021, and is described in Section 5.2 of the main body of the plan. No damage estimates or records related to ice storms are reported specific to the Town of Eaton. Damages to the Town's critical infrastructure or primary transportation routes (State Routes 20, 26, 46, and 12B) would be most impactful to residents. Storm damages would primarily impact the more populated portions of the Town, including the Village of Morrisville and the hamlets of Pierceville, Pine Woods, Pratts, and West Eaton.

5.10.4 *Future Potential Impacts*

The Town's overall vulnerability for an ice storm remains low. Although there is a history of ice storms affecting Madison County, damages affecting the Town are generally low. Debris clearing along roadways is adequately addressed by the Town Highway Department and will continue to be maintained to prevent storm damages.

5.11 Ice Jam

5.11.1 *Description*

For a description of this hazard, please see Section 5.11 of the main body of the plan.

5.11.2 *Hazard Vulnerability*

The Town's overall vulnerability for an ice jam is low, as documented in their hazard analysis in Section 4.1. Within the Town of Eaton, properties along the Chenango River, Callahan Brook, and Eaton Brook are most vulnerable to ice jams.

5.11.3 *Historical Hazard Occurrences and Damage Estimates*

The U.S. Army Corps of Engineers (USACE) Cold Regions Research and Engineering Laboratory (CRREL) reports no specific ice jam events for the Town of Eaton in the past five years.

5.11.4 *Future Potential Impacts*

The Town's overall vulnerability for an ice jam remains low. Properties along lakes and streams throughout the Town, primarily the Chenango River, Callahan Brook, and Eaton Brook remain vulnerable to ice jams, but these events typically do not cause significant property damages. The frequency and magnitude of ice jam events may increase due to climate change.

6. National Flood Insurance Program

Long-term mitigation of potential flood impacts can be best achieved through comprehensive floodplain management regulations and enforcement at a local level. The National Flood Insurance Program (NFIP), regulated by FEMA, aims to reduce the impact of flooding on private and public structures by providing affordable insurance for property owners. The program encourages local jurisdictions to adopt and enforce floodplain management regulations in order to mitigate the potential effects of flooding on new and existing infrastructure (FEMA, 2015).

Communities that participate in the NFIP adopt floodplain ordinances. If an insured structure incurs damage costs that are over 50% of its market value, the owner must comply with the local floodplain regulations when repairing or rebuilding the structure. A structure could be rebuilt at a higher elevation, or it could be acquired and demolished by the municipality or relocated outside of the floodplain. Insured structures that are located within floodplains identified on FEMA's Flood Insurance Rate Maps (FIRMs) may receive payments for structure and content losses if impacted by a flood event.

The NFIP and other flood mitigation actions are important for the protection of public and private property and public safety. Flood mitigation is valuable to communities because it:

- Creates safer environments by reducing loss of life and decreasing property damage;
- Allows individuals to minimize post-flood disaster disruptions and to recover quicker (homes built to NFIP standards generally experience less damage from flood events, and when damage does occur, the flood insurance program protects the homeowner's investment); and
- Lessens the financial impacts on individuals, communities, and other involved parties (FEMA, 2015).

The Town of Eaton currently participates in the NFIP (community ID 360398), and its FIRM(s) became effective on 9/10/1984. The Town joined the NFIP on this same date. NFIP loss claims data were requested from FEMA and a response is pending. According to the County's 2017 HMP, there are no repetitive loss properties in the Town. More current repetitive loss data from FEMA is pending. The Town will continue to comply with the NFIP by enforcing floodplain management requirements and regulating new development in Special Flood Hazard Areas, among other required duties.

7. Mitigation Strategy and Prioritization

7.1 Past, Completed, and Ongoing Initiatives

The Town proposed two mitigation actions in the 2017 Madison County HMP, and the status of each action is summarized in Table 8, below. The Town's 2017 mitigation actions have both been completed, therefore, neither project was re-included in the current HMP update.

Table 8. Status of 2017 Mitigation Actions				
Project Name	Description	Hazard(s) Mitigated	Lead Agency	Status
Williams Corners Road Culvert Repairs	Flooding of the Electric Light Stream resulted in damages to Williams Corner Road including three culverts being washed out, taking the road with it. Reduce vulnerability of existing infrastructure assets and critical facilities from flood damage through repair, improvements and protection. The road was closed for five weeks and made access to properties difficult. The project will include replacement with single arch culvert to handle flows.	Flood	Town of Eaton Highway	Completed; funded through NY Rising
Roberts Road Culvert Repairs	The flooding resulted in damages to the culvert at Roberts Road. The project will repair and upgrade the first culvert below Williams Corner Road to handle calculated flow levels.	Flood	Town of Eaton Highway	Completed; funded through NY Rising

7.2 Proposed Mitigation Actions

The Town proposed four new mitigation actions to be included in the HMP update. These actions are described in Table 9, below and on worksheets included in Attachment A.

Table 9. Proposed Hazard Mitigation Actions									
Action ID	Mitigation Action	Hazard(s) Mitigated	Implementing Agencies (Lead* & Support)	Planning Mechanism	Timeframe	New or Existing Development	Estimated Cost	Funding Source(s)	Priority
Eaton 1	Roberts Road Culvert Upgrade	Flood	SWCD and Town of Eaton Highway Department	None	1 year	Existing	\$200,000	Town Budget, NYSDOT - CHIPS	High
Eaton 2	Gulch Road Culvert Upgrade	Flood	Town of Eaton Highway Department	None	1 year	Existing	\$175,000	Town Budget, NYSDOT - CHIPS	High
Eaton 3	Westcott Road Box Culvert Installation	Flood	Town of Eaton Highway Department	None	1 year	Existing	\$200,000	Town Budget, NYSDOT - CHIPS	High
Eaton 4	Purchase portable generator for use at Town Hall and Highway Department	All	Town Board	None	1 year	New	\$25,000	Town Budget, USDA RD - Community Facilities, FEMA - BRIC, DASNY - SAM	Medium

7.3 Cost-Benefit Analysis

Each of the Town's proposed mitigation actions were evaluated and prioritized using the STAPLEE cost-benefit analysis described in Section 7.2.3 of the main body of the plan. The Town's STAPLEE worksheet is provided in Attachment A. The STAPLEE analysis considers the following lenses of evaluation: social, technological, administrative, political, legal, economic, and environmental. It also considers the level of overall costs and benefits of the action.

Attachment A

Figure 1, Mitigation Action Worksheets, and STAPLEE Worksheet

Madison County HMP Update Mitigation Action Worksheet

Jurisdiction: Town of Eaton

Mitigation Action	
Project ID:	Eaton 1
Project Name:	Roberts Rd Culvert Upgrade
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	A deteriorating and collapsing pipe is causing erosion and washout issues along Roberts Road (different location than 2017 mitigation project on Roberts Road). This is a recurring issue, and the road is currently down to one lane.
Proposed Action	
Description of the Solution:	Existing 9' culvert will be replaced with a new, larger elliptical pipe that can better handle high flows.

Is this project related to a Critical Facility? Yes ☐ No ☒
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater)

Level of Protection:	High	Estimated Benefits (losses avoided):	Reduced flooding and road damages
Useful Life:	30+ years		
Estimated Cost:	\$200K		

Plan for Implementation			
Priority (High, Medium, Low):	High	Responsible Organization:	Town Highway Dept., Madison County SWCD
Desired Timeframe for Implementation:	1 year	Potential Funding Sources:	Town Budget, NYSDOT - CHIPS
Estimated Time Required to Implement:	1 month (after funding is in place)	Local Planning Mechanisms to be used in Implementation, if any:	None

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from current conditions
	Replace culvert with a bridge	\$1.1 million	Long term solution, however cost is much higher. Reduces flood damages by increasing flow capacity.
	Replace culvert with new, larger elliptical pipe	\$200K	Long term solution with lower costs. Reduces flood damages by increasing flow capacity.

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Summary of Progress:	
Evaluation of the Problem and/or Solution:	

Madison County HMP Update Mitigation Action Worksheet

Jurisdiction: Town of Eaton

Mitigation Action	
Project ID:	Eaton 2
Project Name:	Gulch Rd Culvert Upgrade
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	Gulch Road has experienced repeat flooding events due to an undersized culvert. The outfall from the culvert is approximately 20 feet high. The culvert was replaced in-kind in 2013, but cannot convey storm flows adequately.
Proposed Action	
Description of the Solution:	The culvert will be replaced with a larger pipe to better convey flows; a stacked rock wall for bank stabilization will also be constructed to prevent future erosion.

Is this project related to a Critical Facility? Yes ☐ No ☒
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater)

Level of Protection:	High	Estimated Benefits (losses avoided):	Reduced flooding and road damages
Useful Life:	30+ years		
Estimated Cost:	\$175K		

Plan for Implementation			
Priority (High, Medium, Low):	High	Responsible Organization:	Town Highway Dept., Madison County SWCD
Desired Timeframe for Implementation:	1 year	Potential Funding Sources:	Town Budget, NYSDOT - CHIPS
Estimated Time Required to Implement:	1 month (after funding is in place)	Local Planning Mechanisms to be used in Implementation, if any:	None

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from current conditions
	Keep remaining culvert and add bank stabilization	\$100K	May reduce bank erosion but does not address limited hydraulic capacity of existing culvert
	Replace culvert with new, larger pipe and add bank stabilization	\$175K	Most cost effective solution that will reduce washout damages and provide bank stabilization

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Summary of Progress:	
Evaluation of the Problem and/or Solution:	

Madison County HMP Update Mitigation Action Worksheet

Jurisdiction: Town of Eaton

Mitigation Action	
Project ID:	Eaton 3
Project Name:	Westcott Road Box Culvert Installation
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	The Town experienced flooding and landslides in 2021 adjacent to Hatch Lake. The existing culvert is a small pipe that contains a 90-degree angle which inhibits flows.
Proposed Action	
Description of the Solution:	The culvert will be replaced with a larger, concrete box culvert with a straight alignment to improve flow capacity.

Is this project related to a Critical Facility? Yes ☐ No ☒

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater)

Level of Protection:	High	Estimated Benefits (losses avoided):	Reduced flooding and road damages
Useful Life:	30+ years		
Estimated Cost:	\$200K		

Plan for Implementation

Priority (High, Medium, Low):	High	Responsible Organization:	Town Highway Dept., Madison County SWCD
Desired Timeframe for Implementation:	2 years	Potential Funding Sources:	Town Budget, NYSDOT - CHIPS
Estimated Time Required to Implement:	2 months (after funding is in place)	Local Planning Mechanisms to be used in Implementation, if any:	None

Three Alternatives Considered (Including No Action)

	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from current conditions
	Replace culvert in-kind but realign to omit right angle	\$100K	Short-term solution, does not address limited hydraulic capacity.
	Replace culvert with new, larger box culvert and straighten alignment	\$200K	Most cost effective solution that will reduce washout damages

Progress Report (for Plan Maintenance)

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

Madison County HMP Update Mitigation Action Worksheet

Jurisdiction: Town of Eaton

Mitigation Action	
Project ID:	Eaton 4
Project Name:	Purchase portable generator for use at Town Hall and Highway Department
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	The Town does not have backup power at their Town Hall or Highway Department, leaving both facilities vulnerable to damages and loss of operations during power outages.
Proposed Action	
Description of the Solution:	Purchase portable generator that can be shared between the Town Hall and Highway Department during power outages. The building electrical wiring would have to be retrofit to allow for connections to the generator.

Is this project related to a Critical Facility? Yes ☒ No ☐

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater)

Level of Protection:	Medium	Estimated Benefits (losses avoided):	Improved continuity of operations
Useful Life:	20 years		
Estimated Cost:	\$25K		

Plan for Implementation			
Priority (High, Medium, Low):	Medium	Responsible Organization:	Town Board
Desired Timeframe for Implementation:	5 years	Potential Funding Sources:	Town Budget, USDA RD Community Facilities, FEMA BRIC, DASNY SAM
Estimated Time Required to Implement:	3 months	Local Planning Mechanisms to be used in Implementation, if any:	None

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from current conditions
	Install on-demand generators at both facilities	\$200K	Ideal solution, but significantly more expensive; not seen as a high priority given low frequency of power outage issues experienced by the Town.
	Purchase portable generator to be shared among both facilities	\$25K	Most cost effective solution that will provide critical backup power when needed

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Summary of Progress:	
Evaluation of the Problem and/or Solution:	