

Jurisdictional Annex

Town of Fenner

1. Contacts

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

- Dave Jones – Town Supervisor
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Email: dave.jones4879@gmail.com
- Lisa Dolan – Town Clerk
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Phone: (315) 655-2705
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Town Website: <http://www.townoffenner.com/>

2. Municipal Profile

2.1 Population

The 2020 Census estimated that 1,668 people live in the Town of Fenner. The Town's population has decreased by 3.4% since the 2010 Census (1,726) (U.S. Census Bureau, 2020). The median age in the town is 45 years and 18.0% of the population is over the age of 65. The town covers approximately 31 square miles. The town has an equalized assessed value of approximately \$101 million, which is distributed across a variety of property classes.

2.2 Location

The Town of Fenner is located in the central-western portion of the county and is bordered by the Towns of Sullivan and Lincoln to the north, the Town of Smithfield to the east, the Town of Nelson to the north, and the Town of Cazenovia to the west. Main transportation routes in the Town include State Route 13 and Nelson Road. Population centers within the Town include the Hamlet of Perryville. The Town of Fenner is shown in Figure 1 (Attachment A).

2.3 Governing Body

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

2.4 Recent and Anticipated Future Development

Since the last County HMP (2017), a new Amish school building was constructed, Troyer's Country Store was constructed on Nelson Road, and wind farms have been developed. 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 Fenner	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	3 fire departments
Site Plan Review Requirements	Yes	
Special Use Permits	Yes	
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	

Table 1. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Fenner	Notes
Impact Fees for New Development	No	
State Funding Programs (i.e., NYSEFC, NYSOGR, NYSDEC, others)	Yes	
Utility Fees (i.e., water, sewer, stormwater, gas, electric)	No	
Land Use Regulations		
Density Controls	Yes	1 acre minimum lot size with 200 foot road frontage
Flood Insurance Rate Maps	Yes	
Floodplain Ordinance	Yes	
Hillside Development Regulations	Yes	Construction allowed up to a set % grade
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	No
Stream Dumping Regulations	Yes	State rules apply
Urban Forestry and Landscape Management	No	
Watershed Management	Yes	Oneida Lake Program; 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	Currently working on updating
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	No	
Local Emergency Preparedness/Disaster Response Organizations	Yes	
Local Environmental Protection Organizations	No	
National Weather Service StormReady Certification	No	
Outreach Programs	Yes	Education of Elected to NIMS

Table 1. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Fenner	Notes
		Standards
Partnerships with private entities addressing mitigation or disaster response	No	
School Programs or Adult Educational Programs	Yes	Fenner Renewable Energy Education (FREE) Center
Staff Positions		
Civil Engineer	No	Contract out as needed
Code Enforcement Officer	Yes	
Emergency Manager	Yes	
Floodplain Administrator	Yes	Code Enforcement Officer
Planner/GIS Coordinator	No	County support
Technical Abilities		
Grant Writing	No	
Hazard Information Centers	No	
Hazard Warning Systems	Yes	

3.2 Emergency Communications, Routes, and Shelters

The Town broadcasts emergency notifications to residents using their website, and they are also covered by the County's emergency notification system. Major transportation routes within the Town include Nelson Road and State Route 13. The Town's emergency shelter locations are summarized in Table 2, below.

Table 2. Emergency Shelters						
Facility	Address	Owner/ Occupant	Support medical needs?	ADA Compliant?	Pets accepted?	Notes
Town Hall	3151 Fenner East Road, Cazenovia, NY 13035	Town of Fenner	Yes	Yes	No	Backup power available

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 Fenner 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**
 - Town property (13 acre field) – Buyea Road
 - Two trailer parks – may have open lots
 - Nichols Pond County Park – Nichols Pond Road
 - Fenner Baptist Church – 3122 Bingley Road
- **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. Hazard Vulnerability by Event						
Hazard Event	Extent	Onset	Impact (Damages and Injury)	Frequency	Total Score and Overall Vulnerability	Jurisdiction Rank
Ice Storm	3	3	3	3	12 - High	1
Flood	2	3	3	3	11 - High	2
Severe Thunderstorm/Windstorm/Hail	3	1	3	3	10 - High	3
Severe Winter Storm	3	1	3	3	10 - High	4
Extreme Temperatures	3	1	2	3	9 - High	5
Tornado	1	3	3	1	8 - Moderate	6
Wildfire	1	3	2	1	7 - Moderate	7
Landslide	1	3	1	1	6 - Moderate	8
Earthquake	1	3	1	1	6 - Moderate	9
Drought	1	1	1	1	4 - Low	10

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 Fenner. Table 5, below, denotes the types and locations of critical facilities within the Town. Critical facilities are shown on Figure 1 (Attachment A).

Table 5. Critical Infrastructure in the Town of Fenner		
Facility Name	Address	Located in Floodplain
Amish School	5518 Nelson Rd	No
Cell Tower	3730 Cody Rd	No
County Radio Tower Site 1	4000 Tower Rd	No
County Radio Tower Site 5	2590 Carey Hill Rd	No
Electrical Substation	4744 South Rd	No
Electrical Substation	Cody Rd	No
Electrical Substation	Peterboro Rd	No
Fenner Wind Farm	3542 Peterboro Rd	No
Town of Fenner Offices and Highway Dept	3151 Fenner East 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 Fenner. 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 lack historical records, but they were profiled for future mitigation planning consideration. The Town of Fenner chose not to profile ice jam in their annex even though this hazard was profiled for the County. The Town does not have a history of nor do they have any significant concerns regarding this hazard.

5.1 Ice Storm

5.1.1 *Description*

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

5.1.2 *Hazard Vulnerability*

The Town's overall vulnerability for an ice storm is high, as documented in their hazard analysis in Section 4.1. These storms typically affect most or all of the County. The entire Town of Fenner is susceptible to damages from an ice storm event. Damages to the Town's critical infrastructure or primary transportation routes (Nelson Road and State Route 13) would be most impactful to Town residents. Storm damages would primarily impact the more populated portions of the Town, like the Hamlet of Perryville. The Town Highway Department completes tree maintenance within Town road right of ways to minimize potential damages to overhead utility lines. Private utility right of ways are generally maintained by the individual utility companies.

5.1.3 *Historical Hazard Occurrences and Damage Estimates*

The NCDC reports one ice storm in Madison County in the past five years. The reported ice storm occurred on February 15, 2021, which is described in Section 5.2 of the main body of the plan. No damage estimates related to ice storms are reported specific to the Town of Fenner.

5.1.4 *Future Potential Impacts*

The Town's overall vulnerability to an ice storm remains high. The Town Highway Department and private utility companies will continue to maintain road right-of-ways and utility corridors to mitigate significant storm damages.

5.2 **Flood**

5.2.1 *Description*

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

5.2.2 *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 Canastota Creek, Clockville Creek, Munger Brook, Chittenango Creek, and their tributaries, which drain to Oneida Lake. FEMA provides flood insurance rate maps for the Town of Fenner. 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 100-year floodplains within the Town. Table 6 summarizes the amount of land within the Town of Fenner that is located within 100-year and 500-year floodplains, as mapped by FEMA. None of the Town's critical facilities are located within mapped floodplains.

Table 6. Summary of Areas in Floodplains (Source: Q3 Digital Floodplain Data, 1996)		
Town of Fenner Total Area	Percent of Total Area	
	100-Year Floodplain	500-Year Floodplain
19,908 acres	1.1%	0.0%

5.2.3 Historical Hazard Occurrences and Damage Estimates

The NCDC did not report any floods in the Town of Fenner in the past five years. The Town indicated that there are local records of recurring flood issues along Shepards Road, Hill Road, Mutton Hill Road, East and West Mile Strip Road, and Carrys Hill Road. 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.

5.2.4 Future Potential Impacts

The Town's overall vulnerability to a flood remains high. Properties along streams throughout the Town, including the Canastota Creek, Clockville Creek, Munger Brook, Chittenango Creek, and their tributaries remain most vulnerable to flooding. The Town proposed three flood-related mitigation actions to upgrade existing culverts on Hill Road, Carrys Hill Road, and West Mile Strip Road to reduce the risk of flooding in these locations. These actions are further described in Section 7 of this annex. The frequency and magnitude of flood events may increase due to climate change.

5.3 Severe Thunderstorm, Windstorm, or Hail

5.3.1 Description

For a description of this hazard, please see Section 5.1 of the main body of the plan.

5.3.2 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. The Town Highway Department completes tree maintenance within Town road right of ways to minimize potential damages to overhead utility lines. Private utility right of ways are generally maintained by the individual utility companies. Damages to the Town's critical infrastructure or primary transportation routes (Nelson Road and State Route 13) would be most impactful to Town residents. Storm damages would primarily impact the more populated portions of the Town, like the Hamlet of Perryville.

5.3.3 Historical Hazard Occurrences and Damage Estimates

The NCDC reported one specific severe storm event that occurred in the past five years in the Town of Fenner (Table 7). This record was a severe thunderstorm that occurred on June 27, 2020. Estimated damages for the Town of Fenner were \$50,000. Actual damages were likely greater than those estimated by the NCDC.

Table 7. Severe Storm Event Records for the Town of Fenner				
Event Type	Date	Magnitude	Estimated Property Damage	Estimated Crop Damage
Thunderstorm Wind	6/27/2020	61mph	\$50,000	-
Total			\$50,000	None reported

5.3.4 Future Potential Impacts

The Town's overall vulnerability to severe storms remains high. The Town Highway Department and private utility companies will continue to maintain road right-of-ways and utility corridors to mitigate significant storm damages. The frequency and magnitude of severe thunderstorm, wind, and hail events may increase due to climate change.

5.4 Severe Winter Storm

5.4.1 Description

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

5.4.2 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 Fenner is susceptible to damages from a severe winter storm event. The Town Highway Dept. clears Town streets during heavy snow events, and the Town works with the Madison County Highway Dept. and NYS Dept. 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 (Nelson Road and State Route 13) would be most impactful to Town residents. Storm damages would primarily impact the more populated portions of the Town, like the Hamlet of Perryville.

5.4.3 Historical Hazard Occurrences and Damage Estimates

The Town of Fenner has been affected by a number of severe winter storm events reported for the 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 Fenner.

5.4.4 Future Potential Impacts

The Town's overall vulnerability to a severe winter storm remains moderate. The Town Highway Department and private utility companies will continue to maintain road right-of-ways and utility corridors to mitigate significant storm damages. The severity and frequency of severe winter storms 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 high, as documented in their hazard analysis in Section 4.1. These temperatures typically affect most or all of the County. The entire Town of Fenner is susceptible to extreme temperatures. 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 4.1% of the population in the Town is under 5 years old, and 18.0% of the population is over 65 years old. Approximately 6.2% 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. Each of these events was an extreme cold/wind chill event and was reported for the entire County. 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 Fenner.

5.5.4 Future Potential Impacts

The Town's overall vulnerability to an extreme temperature event remains high. Extreme temperatures are likely to increase in frequency and extremity in the future due to climate change.

5.6 Tornado

5.6.1 Description

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

5.6.2 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 Fenner is susceptible

to damages from a tornado. A tornado can result in severe damage to homes, over-turned automobiles and leveling of utility lines. A tornado can result in severe damage to homes, over-turned automobiles and leveling of utility lines. Topography throughout the Town 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.

5.6.3 Historical Hazard Occurrences and Damage Estimates

Three tornadoes have occurred in Madison County within the past ten years. None of these records occurred in the Town of Fenner. There are no tornado-related damages estimates specific to the Town.

5.6.4 Future Potential Impacts

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

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. These areas are located throughout the entire Town. A portion of the Nelson Swamp Unique Area is located in the Town of Fenner (approximately 10 acres total). State forest lands are shown in Figure 1 (Attachment A).

5.7.3 *Historical Hazard Occurrences and Damage Estimates*

According to Figure 5.14 (Appendix A of the main body of the plan), the northwestern corner of the Town experienced 0.9 to 1.3 wildfires per square mile from 2003 to 2017, and the remainder of the Town experienced 0.4 to 0.8 wildfires per square mile during this time period. The Town did not report any local records of wildfires. 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 forested land and open fields. However, a wildfire is unlikely to cause significant damages to developed properties and critical infrastructure given the rural nature of the Town.

5.8 Landslide

5.8.1 *Description*

For a description of this hazard, please see Section 5.4 of the main body of the plan.

5.8.2 *Hazard Vulnerability*

The Town's overall vulnerability for a landslide is moderate, as documented in their hazard analysis in Section 4.1. The Town is mapped in 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 lakes and streams throughout the Town are more susceptible to landslides. Steep embankments are present along State Route 13, Mutton Hill Road, Mile Strip Road, and Carrys Hill Road.

5.8.3 *Historical Hazard Occurrences and Damage Estimates*

The Town has experienced landslides on State Route 13, Mutton Hill Road, Mile Strip Road, and Carrys Hill Road. 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 a landslide remains moderate. A landslide could occur in the future in areas with steep banks, such as State Route 13, Mutton Hill Road, Mile Strip Road, and Carrys Hill Road. The landslide on Carrys Hill Road was recently stabilized to reduce the future risk of this hazard. However, a landslide is unlikely to cause significant property damages given the rural nature of the Town.

5.9 **Earthquake**

5.9.1 *Description*

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

5.9.2 *Hazard Vulnerability*

The Town's overall vulnerability for an earthquake is moderate, as documented in their hazard analysis in Section 4.1. According to Figure 5.8 of the main body plan, the Town of Fenner has a peak ground acceleration (PGA) Hazard rating of 8-10%g. 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 main transportation routes would result in the most significant impacts to the Town and its residents.

5.9.3 *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 Fenner. An earthquake has the potential to cause hundreds of thousands of dollars in damages.

5.9.4 *Future Potential Impacts*

The Town's overall vulnerability for an earthquake remains moderate, due to the lack of warning and large impact extent associated with this hazard. The Town of Fenner is within an area of light seismic activity in New York State, and is not likely to experience significant earthquake damages to its critical infrastructure.

5.10 **Drought**

5.10.1 *Description*

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

5.10.2 *Hazard Vulnerability*

The Town's overall vulnerability for a drought is low, as documented in their hazard analysis in Section 4.1. Agricultural areas would likely experience the most significant impacts. The majority of the Town consists of agricultural land. The Town does not have a municipal water system; residents rely on private wells and may be susceptible to low water yields during a drought.

5.10.3 *Historical Hazard Occurrences and Damage Estimates*

There are no NCDC or local records of drought events for the Town of Fenner. There are no drought-related damage estimates available for the Town.

5.10.4 *Future Potential Impacts*

The Town's overall vulnerability for a drought remains low. Agricultural properties and residences with wells that are susceptible to low water yields would be most significantly impacted by a drought event. Droughts are likely to increase in frequency and magnitude in the future 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 Fenner currently participates in the NFIP (community ID 360399), and its FIRM(s) became effective on 2/5/1986. 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.

Table 8. Status of 2017 Mitigation Actions Town of Fenner				
Project Name	Description	Hazard(s) Mitigated	Lead Agency	Status
Nichols Pond Road Culvert Repairs	The undersized culvert at this location needs to be upgraded. SWCD staff will assist Town Highway with runoff calculations and culvert sizing.	Flood, Severe Storm	Town of Fenner Highway	Complete
Roberts Road Culvert Repairs	A debris guard consisting of a slanting grate over the culvert entrance could be constructed at this location. A similar grate is planned for a culvert in Morrisville.	Flood, Severe Storm	Town of Fenner Highway	Complete

7.2 Proposed Mitigation Actions

The Town proposed three 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 Town of Fenner									
Action ID	Mitigation Action	Hazard(s) Mitigated	Implementing Agencies (Lead* & Support)	Planning Mechanism	Timeframe	New or Existing Development	Estimated Cost	Funding Source(s)	Priority
Fenner 1	Hill Road Culvert Upgrades	Flood	Town of Fenner Highway Department*	None	2 years	Existing	\$20,000- \$25,000	Town Budget, ARPA, NYSDOT - CHIPS	High
Fenner 2	Carrys Hill Road Culvert Upgrade	Flood	Town of Fenner Highway Department*	None	2 years	Existing	\$10,000	Town Budget, ARPA, NYSDOT - CHIPS	High
Fenner 3	West Mile Strip Road Culvert Upgrade	Flood	Town of Fenner Highway Department*	None	2 years	Existing	\$10,000	Town Budget, ARPA, NYSDOT - CHIPS	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 Fenner

Mitigation Action	
Project ID:	Fenner 1
Project Name:	Hill Road Culvert Upgrades
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	The existing 12-15" culvert pipes on Hill Road beneath driveway crossings are undersized. The Town experiences recurring flooding issues in this location (3-4 times per year) when the culverts become blocked with debris and cannot pass stormwater flows. Flood damages require annual repairs to the road shoulder.
Proposed Action	
Description of the Solution:	Replace existing culverts with larger plastic culvert pipes along Hill Road - approximately 15 total. All will be a minimum of 18" in diameter to improve stormwater flow capacity and reduce flooding issues.

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 associated road damages
Useful Life:	50 years		
Estimated Cost:	\$20-25K		

Plan for Implementation			
Priority (High, Medium, Low):	High	Responsible Organization:	Town of Fenner Highway Dept
Desired Timeframe for Implementation:	2 years	Potential Funding Sources:	Town Budget, ARPA, NYSDOT - CHIPS
Estimated Time Required to Implement:	1 month	Local Planning Mechanisms to be used in Implementation, if any:	N/A

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from existing conditions
	Clear debris from existing culverts once a month	Low	May help flows but does not improve hydraulic capacity of culverts; flooding could still occur
	Upgrade culvert pipe sizes	\$20-25K	Improves hydraulic capacity and reduces risk of debris blockages

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 Fenner

Mitigation Action	
Project ID:	Fenner 2
Project Name:	Carrys Hill Road Culvert Upgrade
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	The Town experiences recurring washouts on the road shoulder due to an undersized culvert on Carrys Hill Road.
Proposed Action	
Description of the Solution:	Upgrade existing culvert with a larger 24" culvert pipe.

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 road damages, improved stormwater flows
Useful Life:	50 years		
Estimated Cost:	\$10K		

Plan for Implementation			
Priority (High, Medium, Low):	High	Responsible Organization:	Town of Fenner Highway Dept
Desired Timeframe for Implementation:	2 years	Potential Funding Sources:	Town Budget, ARPA, NYSDOT- CHIPS
Estimated Time Required to Implement:	1 month	Local Planning Mechanisms to be used in Implementation, if any:	N/A

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from existing conditions
	Replace culvert in-kind	\$8K	Would improve structural integrity/lifespan of culvert but does not address limited hydraulic capacity.
	Upgrade culvert to larger pipe	\$10K	Improved hydraulic capacity; would reduce future flood issues and associated road 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 Fenner

Mitigation Action	
Project ID:	Fenner 3
Project Name:	W Milestrip Road Culvert Upgrade
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	The Town has experienced recurring flood damages due to an undersized culvert on W Milestrip Road. The existing culvert is also in poor condition and in need of replacement.
Proposed Action	
Description of the Solution:	Replace culvert with a larger culvert pipe to improve structural integrity and hydraulic 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 associated road damages
Useful Life:	50 years		
Estimated Cost:	\$10K		

Plan for Implementation			
Priority (High, Medium, Low):	Medium	Responsible Organization:	Town of Fenner Highway Dept
Desired Timeframe for Implementation:	2 years	Potential Funding Sources:	Town Budget, ARPA, NYSDOT-CHIPS
Estimated Time Required to Implement:	1 month	Local Planning Mechanisms to be used in Implementation, if any:	N/A

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No change from existing conditions.
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Date of Status Report:	
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Evaluation of the Problem and/or Solution:	