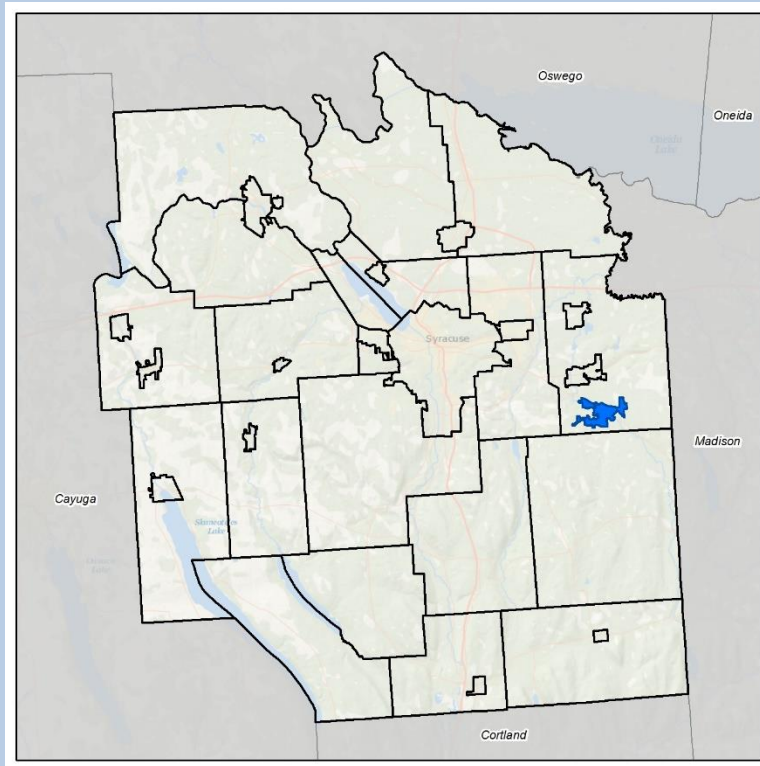







MUNICIPAL ANNEX | Village of Manlius




Total Population
(2010 Census)
4,704


Total Number of
Buildings
1,724


Number of National
Flood Insurance
Program (NFIP) Policies
and Percent in
Regulatory Floodplain
43 (42%)
Number of Repetitive
Loss (RL) Properties
0


Total Agricultural Land
(acres)
19.3

Harmful Algal Bloom
Impacted Waterbody
No


Proposed
Project
Types

Structure and Infrastructure
Projects, Education and
Awareness Programs, and
Natural Systems Protection


Mitigation
Focus

Multi-Hazard



9.20 VILLAGE OF MANLIUS

This section presents the jurisdictional annex for the Village of Manlius. 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 village participated in the planning process; an assessment of the Village of Manlius' risk and vulnerability; the different capabilities utilized in the village; and an action plan that will be implemented to achieve a more resilient community.

9.20.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Manlius' hazard mitigation plan primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Name: Paul Whorrall Title: Mayor Phone Number: 315-682-9171 Address: One Arkie Albanese Avenue Manlius, New York 13104 Email: paulw@manliusvillage.org	Name: Martha Dygert Title: Administrator Phone Number: 315-840-0700 Address: One Arkie Albanese Avenue Manlius, New York 13104 Email: mdygert@manliusvillage.org
Floodplain Administrator	
Name: Michael Decker Title: Code Enforcement Officer Phone Number: 315-378-2722 Address: One Arkie Albanese Avenue Manlius, New York 13104	

9.20.2 Municipal Profile

The Village of Manlius lies near the eastern border of Onondaga County in western New York State. The Village of Manlius has a total area of 1.8 square miles. The Village of Manlius is near the southern town line of the Town of Manlius and is southeast of the City of Syracuse. New York State Route 92 and New York State Route 173 intersect in Manlius. Refer to Section 9.19 (Town of Manlius) for their individual annex. The estimated 2016 population was 4,600, which is a 2.2 percent decrease in population from 2010 (4,704 persons).

Data from the 2016 U.S. Census American Community Survey estimates that 5.2 percent of the village population is five years of age or younger, and 16.3 percent is 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

Originally one of the communities in the Central New York Military Tract (defined as Township Number Seven), the town of Manlius was settled in 1794. The village, however was settled two years before by John A. Shaeffer, a German. The first schoolhouse in Manlius was erected in 1798. Made out of logs, it was located near a local resident's mill, named only as Mr. Costello. By 1801, the village began to grow, with six buildings, and several amenities including a blacksmith, store, doctor, lawyer, and a tavern. By the turn of the 19th century, there was also a post office defined as "Liberty Square". However, the name of Liberty Square was eventually renamed to Manlius Square. After four years, Manlius had grown at a rapid rate, with the building of thirty houses. The growing village was defined as one of the most prominent business locations in Onondaga County. The community became the first village in the county in 1813.



Before the construction of the Erie Canal, the Village of Manlius was a large business point along the Cherry Valley Turnpike and Seneca Turnpikes. Since the travelling of goods passed through Manlius on these turnpikes, every other structure along the highways was taverns. Between Manlius and nearby Chittenango, New York, there were only about six or seven public buildings. Most of this stretch of the Seneca Turnpike is now New York State Route 173. For twenty years, Manlius was the biggest trade center in Onondaga County, with what is now Syracuse, New York.

Growth/Development Trends

Table 9.20-1 summarizes major residential/commercial development and any known or anticipated major residential/commercial development and major infrastructure development that is likely to be occur within the municipality in the next five years (as of October 2018). Refer to the map in Figure 9.20-1 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.20-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Parcel ID)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present					
Madison Row	PUD	2	Highbridge Rd.	Carbonate Bedrock	Completed
CVS	Commercial	1	Fayette St.	Carbonate Bedrock	Completed
Known or Anticipated Development in the Next Five (5) Years					
Willowbrook Crossing	PUD	5	Fayette St.	Carbonate Bedrock	Planning
Center Field Court	Res	7	Left Field Dr.	Carbonate Bedrock	Planning

** Only location-specific hazard zones or vulnerabilities identified.*

9.20.3 Hazard Event History Specific to the Village of Manlius

Onondaga County has a history of natural events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The Village of Manlius' history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Onondaga County. Table 9.20-2 provides details regarding municipal-specific loss and damages the village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.20-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
April – May 2011	Severe Storms, Flooding, Tornadoes, and Straight-Line Winds (FEMA-DR-1993)	Yes	A slow moving warm front pushed northward across central New York late in the afternoon on April 25th. Severe weather developed, and in addition to reports of severe wind damage and hail, plenty of wind shear in the vicinity of the warm front allowed for a few super-cell thunderstorms and tornadoes to develop. In addition, areas of heavy rain caused	While the county was impacted, the village did not report damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			significant flash flooding in several locations of central New York. On May 26, a deep upper level low pressure system shifted east from the mid-Mississippi Valley region through the afternoon and evening, allowing numerous showers and thunderstorms to develop. Many reports of large hail and damaging winds occurred in central New York.	
June 30- July 1, 2015	Flash Flood	No	An unseasonably strong storm system tapping into above normal moisture sources across the Great Lakes and Northeast triggered multiple heavy rain producing thunderstorms across the region. Localized torrential rainfall in central New York caused serious urban flash flooding in the Syracuse, NY metropolitan area. Damages are estimated between three and five million dollars.	While the county was impacted, the village did not report damages.
July 1, 2017	Flash Flood	No	A tropical moisture laden air mass produced numerous showers and thunderstorms which traveled repeatedly over the same areas of the Finger Lakes Region and Upper Mohawk Valley. Widespread flash and urban flooding developed in portions of Cayuga, Onondaga, Madison and Oneida counties. Hardest hit areas were the villages and towns of Moravia, Chittenango, Oneida, and Utica to name a few. Total rainfall amounts along a narrow corridor from Moravia to Utica generally ranged from 2.5 to 5 inches, most of which fell in less than 1 to 2 hours. Total damages from this event range from \$10-\$15 million dollars Countywide.	While the county was impacted, the village did not report damages.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

9.20.4 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 hazards of greatest concern and risk to the Village of Manlius. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk Ranking

Error! Reference source not found. includes 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



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 town or village may have differing degrees of risk exposure and vulnerability compared to Onondaga County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Village of Manlius. The Village of Manlius 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 village indicated the following:

- The village agreed with the calculated hazard rankings.

Table 9.20-3. Village of Manlius Hazard Ranking Input

HAZARD	Drought	Earthquake	Flood	Geologic	Harmful Algal Bloom	Invasive Species	Severe Storm	Severe Winter Storm
RELATIVE RISK FACTOR	High	Low	High	Low	Low	Low	High	High

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

High = Total hazard priority risk ranking score of 5 and above

Medium = Total hazard priority risk ranking of 3.9 – 4.9

Low = Total hazard risk ranking below 3.8

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

Critical Facilities Flood Risk

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 500-year flood event, or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

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



Table 9.20-4. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
Brookdale Manlius	Assisted Living	X	X	0%	0%	V. Manlius-3
7-600961 - VALVOLINE LLC 020068	Bulk Chemical Storage	X	X	-	-	-
7-600967 - HOLLOWICK INC	Bulk Chemical Storage	X	X	-	-	-
YMCA of Greater Syracuse	Day Care		X	-	-	-
Village of Manlius	DPW		X	-	-	-
NGRID Manlius Electrical Substation	Electric Transfer		X	-	-	-

Source: FEMA 2016, SOCPA 2018

The village reviewed the critical facilities table and decided that it did not consider Valvoline LLC or Hollowick Inc. to be critical facilities and therefore did not develop mitigation actions.

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- Due to a longer and more complete record of regional and local rainfall events, the current 100-year peak design flood has increased compared to when the Glencliffe Retention Basin Dam was originally designed. Therefore, the existing dam no longer meets the higher requirements for a Class B Intermediate Hazard Dam.
- Tick infestations have resulted due to restrictions on the control of the deer population within the boundaries of the village. Without adoption of a local deer control policy, the deer population will continue to increase in residential neighborhoods.

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

- Flooding at Limestone Plaza, Carriage House Apartments, and Lower Glencliffe residences
- Tick populations at Mill Run Park, Glencliffe Track, and Academy Hill

9.20.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms



Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Village of Manlius.

Table 9.20-5. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Comprehensive Plan	Yes 2007	Local	Village of Manlius	Vision Manlius: Village of Manlius Comprehensive Plan
Capital Improvements Plan	No	-	-	-
Floodplain Management / Basin Plan	Yes 2017	Local	Village of Manlius	Floodplain Management Plan
Stormwater Management Plan	Yes	Local	Village of Manlius	Stormwater Management Plan
Open Space Plan	No	-	-	-
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	Yes 2017	Local	Village of Manlius	Comprehensive Emergency Management Plan
Emergency Operation Plan	Yes 2017	Local	Village of Manlius	Emergency Operation Plan
Evacuation Plan	Yes	Local	Town of Manlius Police Dept.	Evacuation Plan
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	Yes 2017	Local	-	Transportation Plan
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes	State & Local	Codes	Chapter 38; Adopted by the Board of Trustees of the Village of Manlius: Art. I, 10-27-1959; Art. II, 10-27-1959. Sections 38-2, 38-3, 38-5, 38-8 and 38-9 amended at time of adoption of Code; see Ch. 1, General Provisions, Art. I. Other amendments noted where applicable.
Zoning Ordinance	Yes	Local	Village of Manlius	Chapter 99
Subdivision Ordinance	Yes	Local	Village of Manlius	Chapter 87; Adopted by the Board of Trustees of the Village of Manlius 5-13-1986 by L.L. No. 2-1986
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Village of Manlius	Chapter 55; Adopted by the Board of Trustees of the Village of Manlius 7-14-1987 by L.L. No. 1-1987;



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
				amended in its entirety 4-10-2001 by L.L. No. 2-2001. Amendments noted where applicable
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	Codes	State mandated BFE+2 for all construction, both residential and non-residential
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	Yes	Local	Village of Manlius	Chapter 99 Article V §99-37 Site Development Regulations: Amended 2-27-1990 by L.L. No. 2-1990; 4-9-2002 by L.L. No. 1-2002
Stormwater Management Ordinance	Yes	Local	Village of Manlius	Chapter 50: Adopted by the Board of Trustees of the Village of Manlius 12-18-2007 by L.L. No. 2-2007. Editor's Note: This local law also repealed former Ch. 50, Erosion and Sediment Control, adopted 9-22-1992. Amendments noted where applicable.
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Village of Manlius	SPEDES ID: NYR20A197
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	Yes	State	NYS Department of State, Real Estate Agent	NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

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

Table 9.20-6. Administrative and Technical Capabilities

Resources	Is this in place? (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	-
Maintenance programs to reduce risk	Yes	Village DPW



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Mutual aid agreements	Yes	Village Fire Dept.
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	MRB and/or Napierala Engineers
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Village Codes
Planners or engineers with an understanding of natural hazards	Yes	-
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Officer
Surveyor(s)	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
Warning systems/services	No	-
Emergency Manager	Yes	Village Office
Grant writer(s)	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-

Fiscal Capability

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

Table 9.20-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes (eligible but not used)
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other	No

Community Classifications

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



Table 9.20-8. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	2 village/town - 9 Rural	2017
NYSDEC Climate Smart Community	Yes	-	-
Storm Ready Certification		-	-
Firewise Communities classification	No	-	-
Natural disaster/safety programs in/for schools	Unknown	-	-
Organizations with mitigation focus (advocacy group, non-government)	Unknown	-	-
Public education program/outreach (through website, social media)	Yes	-	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-
Other	No	-	-

Note:

N/A Not applicable
 NP Not participating
 - Unavailable

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule (<https://www.isomitigation.com/bcegs/>)
- The ISO Mitigation online ISO's Public Protection website at <https://www.isomitigation.com/ppc/>
- New York State Climate Smart Communities (<http://www.dec.ny.gov/energy/56876.html>)
- The National Weather Service Storm Ready website at <https://www.weather.gov/stormready/communities>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Village of Manlius' capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.



Table 9.20-9. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and regulatory capability	X - Limited due to staff shortages		
Administrative and technical capability	X - Limited due to staff shortages		
Fiscal capability	X - Limited due to funding shortages		
Community political capability		X	
Community resiliency capability		X	
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program

The Flood Damage Prevention Ordinance for the Village of Manlius meets the minimum State and Federal regulatory standards. The ordinance specifies requirements for development within areas of special flood hazard, including base flood elevation survey and building elevation requirements for new construction and substantial improvements.

NFIP Floodplain Administrator (FPA)

Michael Decker, Codes Enforcement Officer

National Flood Insurance Program (NFIP) Summary

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

Table 9.20-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Village of Manlius	43	28	\$100,960	0	0	18

Source: FEMA Region 2 2018.

(1) Policies, claims, RL, and SRL statistics provided by FEMA Region 2, and are current as of June 30, 2018. Total number of RL properties does not include SRL properties. Number of claims represents claims closed by July 31, 2018.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) Number of policies inside and outside of flood zones is based on latitude and longitude coordinates provided by FEMA Region 2 in the policy file. FEMA noted that for a property with more than one entry, more than one policy may have been in force or more than one Geographic Information System (GIS) specification was possible. Number of policies and claims, and claims total, exclude properties outside Onondaga County boundary, based on provided latitude and longitude coordinates.

RL Repetitive Loss

SRL Severe Repetitive Loss

Resources

The FPA is the sole person responsible for floodplain administration with contract staff if necessary. NFIP administration services and functions include permit review, damage assessments, and record-keeping. The village does conduct outreach on flood hazards/risk and flood risk reduction as part of their MS4 requirements in coordination with the CNYRDPB Stormwater Coalition. The village works to address floodprone residential properties along the Limestone Creek, including Brookhill Drive North along the west branch. The village works



with the Town of Manlius and property owners to identify appropriate mitigation actions, which may include property elevations and flood retrofits, and supports implementation of the those actions.

The FPA noted that the village does not have access to resources to determine possible future flooding conditions from climate change. The FPA feels adequately supported and trained to fulfill their responsibilities as the municipal floodplain administrator and noted that there are no present barriers to running an effective program. The FPA would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Compliance History

The Village of Manlius is in good standing in the NFIP. According to data received by NYSDEC, a compliance audit has not been conducted for the municipality but the village will determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed. The village maintains compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.

Regulatory

Flood Damage Prevention Ordinance: The Village of Manlius Flood Damage Prevention Ordinance (Chapter 55 of the municipal code) was adopted to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.
- Control filling, grading, dredging and other development which may increase erosion or flood damages.
- Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.
- Qualify for and maintain participation in the National Flood Insurance Program.

The objectives of the chapter are to:

- Protect human life and health.
- Minimize expenditure of public money for costly flood-control projects.
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- Minimize prolonged business interruptions.
- Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, streets and bridges, located in areas of special flood hazard.
- Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood-blight areas.
- Provide that developers are notified that property is in an area of special flood hazard.
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.



The FPA noted that there are other local ordinances, plans or programs that support floodplain management and meeting the NFIP requirements. The FPA stated that the village has considered joining the Community Rating System (CRS) program and there would be community interest in attending a CRS seminar if it was offered locally.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures, which is also indicated below.

Planning

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, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Existing Integration

Existing planning initiatives in the village include a collection of approaches that integrate hazard mitigation.

Onondaga County Hazard Mitigation Plan: The Village of Manlius supports the implementation, monitoring, maintenance, and updating of this Plan. The village supports County-wide initiatives identified in Section 9.1 of the County Annex.

Comprehensive Plan: The Village of Manlius' Comprehensive Plan includes areas of natural hazard risk and refers to the local hazard mitigation plan. The plan guides development efforts of the village and assists to prioritize resources. The primary priority is to enhance the overall quality of life in the village, with a specific goal to protect and enhance the natural resources of the village. Specific objectives include encouraging future development that minimizes negative impact on natural resources and both protects and enhances lands which are environmentally significant or sensitive. Recommended actions include formally delineating the village's wetlands; developing a Freshwater Wetlands and Water Bodies Overlay District to protect the village's wetlands and stream corridors; and reviewing and developing regulations to protect water resources from future development. In addition to water-related natural resources, the plan recommends the development of a community-wide natural resources inventory, as well as a recreation master plan and related regulatory tools to protect open spaces.

Stormwater Management Plan: The Village of Manlius is an MS4 Regulated Community and has a formal Stormwater Management Plan. The Plan specifies projects/actions/initiatives to reduce the volume of stormwater or otherwise mitigate stormwater flooding. The 2018 Stormwater Management Program MS4 Annual Report encompasses a summary of the village's compliance measures for the 2017-2018 reporting year. The report includes a variety of minimum control measures (MCMs) to guide stormwater management. MCMs include: public education and outreach, public involvement, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, pollution prevention for municipal operations.

Emergency Plans: The Village of Manlius has a Comprehensive Emergency Management Plan, Continuity of Operations/Continuity of Government (COOP/COG) plan(s), and a Post-Disaster Recovery/Redevelopment



Plan. The Plans refer to the Hazard Mitigation Plan and identify specific mitigation projects/activities. The village continues to develop, enhance, and implement existing emergency plans.

The Village of Manlius does not have a Re-Development Plan, Growth Plan, Economic Development Plan, Open Space Plan, Watershed or Stream Corridor Management Plan, Local Waterfront Revitalization Plan, or resilience plan/strategy, Climate Adaptation Plan/strategy.

Opportunities for Future Integration

The update of existing plans and development of future new plans could include discussion of natural hazard risk and refer to the Countywide Hazard Mitigation Plan.

Regulatory and Enforcement (Ordinances)

The village has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the Establishment of Boards (see Operational and Administration below), Fire Prevention Ordinance, Sewers and Sewage Disposal, Environmental Quality Review, Ordinance, Flood Damage Prevention Ordinance, Stormwater Management Ordinance, Zoning Ordinance, Subdivision of Land Ordinance. The village also adheres to the New York State Fire Prevention and Building Code. The municipal Code and ordinances are available on the village website: <https://manliusvillage.org/>

Existing Integration

Zoning Ordinance: The Village of Manlius Zoning Ordinance (Chapter 99 of the municipal code) establishes zoning districts, the zoning map, general regulations, administration, interpretation, enforcement, commercial district guidelines, and zoning incentives for commercial districts.

Subdivision Ordinance: The Village of Manlius Subdivision Ordinance (Chapter 87 of the municipal code) was established so that the subdivision and development of land for residential, commercial and industrial and other purposes shall be guided and regulated in such a manner as to meet the following requirements for orderly and harmonious growth. Land to be subdivided or developed shall be of such character that it can be used safely without danger to health; or peril from fire, flood or erosion; excessive noise or smoke; or other menace. Proper provisions shall be made for drainage, water supply, sewage disposal and other appropriate utility services. The proposed streets shall provide a safe, convenient and functional system for vehicular circulation and shall be properly related to the Master Plan of the area. Streets shall be of such width, grade and location as to accommodate prospective traffic as determined by existing and probable future land and building uses. Buildings, lots, blocks and streets shall be properly constructed in accordance with all applicable codes and shall be so arranged as to afford adequate light and air, to facilitate fire protection and to provide ample access to buildings for fire-fighting equipment. Land shall be subdivided or developed with due regard to topography so that the natural beauty of the land and vegetation shall be protected and enhanced. Adequate sites for schools, parks, playgrounds and other community services shall be located so that residents of all neighborhoods shall have convenient access to such facilities.

Stormwater Management and Erosion and Sediment Control Ordinance: The Village of Manlius Stormwater Management and Erosion and Sediment Control Ordinance (Chapter 50 of the municipal code) was adopted to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the Village of Manlius and to address the findings of fact identified herein. This chapter seeks to meet those purposes by achieving the following objectives:

- Meet the requirements of minimum control measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, as amended or revised;



- Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, GP-02-01, as amended or revised;
- Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels;
- Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;
- Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

The Village of Manlius' municipal zoning, subdivision regulations, and site plan review process consider natural hazard risk and require developers to take additional actions to mitigate natural hazard risk. The Planning Board and/or ZBA is provided with federal, state, and local regulations, GIS information, Pictometry, and BAS to guide their decisions with respect to natural hazard risk management.

Opportunities for Future Integration

The Planning Board and ZBA could also be provided with access to NYSDEC and the Army Corps of Engineers (USACE) for assistance in decision making.

Operational and Administration

The village has established a Planning Board and Zoning Board of Appeals to support land use decisions, public health and safety and assure compliance with regulations, ordinances and the Comprehensive Plan. Additional committees include a Recreation Advisory Board and a Beautification Committee. Village staff includes a Code Enforcement Officer.

Existing Integration

Planning Board: The Village of Manlius has established the Village of Manlius Planning Board. Efforts are made to ensure qualified members of the Planning Board represent a variety of ethnic, professional, and civil groups in the Village of Manlius. The Planning Board has the full power and authority to make investigations of maps, designs, reports, and recommendations relating to the planning and development of the Village of Manlius or other matters as referred to the Planning Board by the Board of Trustees. The Village of Manlius' Planning Board meets the first Tuesday of every month at 7:00 PM at the Manlius Village Centre. All meetings of the Planning Board are at the call of the chairperson and at such other times as the Board may determine. Chapter 18 of the municipal code establishes the Planning Board. The Planning Board reviews all plans for property and development.

Zoning Board: The Village of Manlius' Zoning Board meets the first and third Monday of every month at 7:00PM at the Manlius Village Centre. The Zoning Board of Appeals consists of five members, which are appointed by the Village of Manlius. The Zoning Board is a quasi-judicial board that is charged with the responsibility for ensuring that the zoning ordinances are complied with or that variances and/or special approvals are authorized. The Zoning Board reviews all plans for property and development.

Mutual Aid Agreements: The Village of Manlius works to create/enhance/ maintain mutual aid agreements with neighboring communities.



Stream Team Program: The Village of Manlius supports/participates in the Stream Team program offered by the Onondaga County SWCD, to assist in the removal of debris, log jams, etc. in flood vulnerable stream sections.

Vegetative Management: The village's tree trimming program prioritizes based on risk to electrical lines and works in coordination with Cornell's Cooperative Extension to plan native and resilient tree species.

Water Resources Protection: The Village of Manlius reviews and/or develops regulations to protect water resources from future development adjacent to the creek. Such regulations may include overlay protection districts and/or setback requirements. Regulations may apply, but are not limited to, the following:

- Limestone Creek
- Perry Springs
- Centre Pond
- Ledyard Canal

The Engineer and Codes Officer review all plans. The Engineer, Highway Superintendent, and Codes Officer performs Stormwater Management functions. The Codes Officer is responsible for NFIP Floodplain Management functions. The village contracts with engineering firms that have experience with developing Benefit-Cost Analysis, Substantial Damage Estimates, and preparation of grant applications for mitigation projects. The Public Works and Codes departments have job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazard risk. Both departments receive training/continuing professional education which supports natural hazard risk reduction.

Opportunities for Future Integration

The Planning Board and the Zoning Board of Appeals could be more proactive rather than reactive to applications. Staff could receive additional training regarding natural hazard risk.

Funding

Existing Integration

The municipal /operating budget includes line items for mitigation projects/activities. The village's Capital Improvements Budget includes budget for mitigation-related projects. The village has not pursued or been awarded grant funds for mitigation related projects. The village does not have any other mechanisms to fiscally support hazard mitigation projects.

Opportunities for Future Integration

The village could supplement allocated municipal funding for mitigation projects by applying for grant funding.

Education and Outreach

Existing Integration

The Village of Manlius operates a municipal website (<http://www.manliusvillage.org/>) which hosts community news and information. The village also have a Facebook page, Twitter handle, Youtube handle, and Instagram account. The village conducts outreach and education on emergency preparedness.

Opportunities for Future Integration

The village could expand outreach and education to include natural hazard risk and homeowner mitigation actions. The village could develop education/outreach programs.



Sheltering, Evacuation, and Temporary Housing

Temporary housing, evacuation routes, and sheltering measures must 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.

Temporary and Permanent Housing

To accommodate longer term housing needs of permanently displaced residents, there is an existing supply of vacant housing units within the county which may be able to satisfy and absorb those housing needs. The county also has ample buildable land availability throughout its communities to satisfy construction of new housing units if needed, as mapped in Section 4, figure 4-20 in Volume I of this plan. Of note, given the nature of the hazards of concern to Onondaga County, the extent of housing need is also not likely to exceed currently available housing stock for all but the most extreme and widespread hazard events.

Evacuation and Sheltering Needs

The Village of Manlius has designated the following emergency shelters:

- Village Centre: 1 Arkie Albanese Avenue. The Village Centre has a capacity for 80, is ADA compliant, has backup power, has a paramedic ambulance, and has a kitchen. The Village Centre does not accommodate pets.
- Fire Station: 8200 Cazenovia Road. The Fire Station has a capacity of 100, is ADA compliant, has backup power, has a paramedic ambulance, and has a kitchen and showers. The Fire Station does not accommodate pets.

The village has established Routes 92 and 173 as evacuation routes, due to the location of these arterial routes on higher ground and streamlined access to each quadrant of the community, so as not to cause traffic congestion.

Per the County Emergency Management Plan, in the event of a hazard occurrence, the Department of Emergency Management is tasked with coordinating evacuation procedures with the Sheriff's Department, the On-Scene Commander, the Transportation Coordinator, the ARC, hospitals, special facilities, the fire service and the Health Department. The Sheriff's Department is responsible for implementing traffic control procedures including coordination of vehicular traffic and protection of resources, facilities and services in the affected areas. As noted in Section 4, Figure 4-19 in Volume I of this plan, the primary roads and highways are the evacuation routes for Onondaga County; the county is fortunate to have a variety of well-connected arterial and collector roadways to provide a variety of routing options during times of large-scale evacuation.

The American Red Cross (ARC) has primary contractual responsibility to provide sheltering, including short term housing, for Onondaga County individuals and families during an emergency occurring in Onondaga County. Services of the ARC include emergency sheltering needs, mass care, feeding, information and referral, and special population assistance. A confidential shelters list is maintained by the Department of Emergency Management and the ARC which identifies capacity for 15,000+ residents across Onondaga County. The ARC is responsible for maintaining shelter and temporary housing agreements with selected facilities.

9.20.6 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 2013 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.

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Table 9.20-11. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
VMN-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Flood Severe Storm	Properties located in floodplains	Municipality through NFIP Floodplain Administrator	In Progress	Cost	Low	1. Include in 2019 HMP 2. No Change 3.
						Level of Protection	Moderate	
						Damages Avoided; Evidence of Success		
VMN-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Flood Severe Storm		Municipality NFIP	In Progress	Cost	Medium	1. Include in 2019 HMP 2. No Change 3.
						Level of Protection	Moderate	
						Damages Avoided; Evidence of Success		
VMN-2	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: <ul style="list-style-type: none">Provide and maintain links to the Onondaga County HMP website, and regularly post notices on the municipal homepage referencing the Onondaga County HMP webpages.Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.Use the village email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. Municipal outreach activities to be supported by the County, as identified at County initiative OC-0.							
	See above				In Progress	Cost		1. Include in 2019 HMP 2. No Change
						Level of Protection		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Damages Avoided; Evidence of Success		3.
VMN-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	Flood Severe Storm		Municipality	Ongoing capability	Cost	Low	1. Discontinue
						Level of Protection	High	2.
						VBV-4 Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-4	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives VMN-1a, 1b, 2, and 9 through 11.	Flood		NFIP	Ongoing capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-5	Continue to develop, enhance, and implement existing emergency plans.	All Hazards		County OEM SEMD Municipality	Ongoing capability	Cost	Low-Medium	1. Discontinue
						Level of Protection	Moderate	2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	All Hazards		Municipality	Ongoing capability	Cost	Low-Medium	1. Discontinue
						Level of Protection	Moderate	2.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	All Hazards		OCSWEP OCSWCD Municipality	Ongoing capability	Cost	Low-Medium	1. Discontinue
						Level of Protection	Moderate	2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-8	Support/Participate in the Stream Team program offered by the Onondaga County SWCD, to assist in the removal of debris, log jams, etc. in flood vulnerable stream sections.	Flood Severe Storm		OCSWCD	Ongoing capability	Cost	Moderate	1. Discontinue
						Level of Protection	Moderate	2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-9	Per village Comprehensive Plan - Review and/or develop regulations to protect water resources from future development adjacent to the creek. Such regulations may include overlay protection districts and/or setback requirements. Regulations may apply, but are not limited to, the following: • Limestone Creek • Perry Springs • Centre Pond • Ledyard Canal	Flood	Past Events	Municipality	Ongoing capability	Cost	Low	1. Include in 2019 HMP
						Level of Protection	Moderate	2. No Change
						Damages Avoided; Evidence of Success		3.
VMN-10	Address floodprone residential properties along the Limestone Creek, including Brookhill Drive North along the west branch. Work with Town of Manlius and property owners to identify appropriate mitigation actions, which may include property elevations and flood retrofits, and support implementation of the those actions	Flood	Past Events	Municipality Homeowners	Ongoing	Cost	Low	1. Include in 2019 HMP
						Level of Protection	Moderate	2. No Change
						Damages Avoided; Evidence of Success		3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
VMN-11	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	All Hazards			Ongoing capability	Cost	Medium	1. Discontinue
						Level of Protection	Moderate	2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
VMN-12	Within the first year of plan implementation, identify order of magnitude costs for structural and infrastructure mitigation projects identified in this municipal annex, and identify the mitigation benefits associated with each of these initiatives. An updated project prioritization for projects shall be provided as part of the 1st year annual review and update.							
	See above.	All Hazards			In Progress	Cost	Low-Medium	1. Include in 2019 HMP
						Level of Protection	Moderate	2. No Change
						Damages Avoided; Evidence of Success		3.



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Manlius has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- The Village of Manlius has performed ongoing maintenance projects to reduce the impact of flooding but has not identified specific mitigation projects/activities that have been completed but were not identified in the previous mitigation strategy in the 2013 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Manlius participated in a mitigation action workshop on September 20, 2018 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 9.20-12 summarizes the comprehensive-range of specific mitigation initiatives the Village of Manlius 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 9.20-9.20-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.20-12. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem	Description of Solution?	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. of Manlius-1	Deer Tick Management Program	1,2,4,5	Invasive Deer Ticks	All R-1 Zoned Districts – restrictions on control of the deer population within the boundaries of the village has resulted in deer tick infestations. Without adoption of a local deer control policy, the deer population will continue to increase in residential neighborhoods.	Neighboring communities have adopted a deer management program allowing for control of the deer populations with approvals sought and granted by NYSDEC. These programs have been successful however not without potential repercussions from animal rights activists. The Village of Manlius will seek to adopt those programs previously approved by NYSDEC with an added community education program.	No	Yes	6 months – 1 year	Village of Manlius and NYSDEC	\$20,000	\$500,000	HMGP/ NYS	High	NSP, EAP	NR, PI



Table 9.20-12. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem	Description of Solution?	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. of Manlius-2	Basin Dam Mitigation	1, 3, 4, 5, 6	Flood	Due to a longer and more complete record of regional and local rainfall events, the current 100-year peak design flood has increased compared to when the Glencliffe Retention Basin Dam was originally designed. Therefore, the existing dam no longer meets the higher requirements for a Class B Intermediate Hazard Dam.	According to the Glencliff Road Detention Basin Dam Hazard Assessment completed 2017, the dam will have to be modified or breached if the change in hazard class (to Class A Low Hazard Dam) is not approved by the NYSDEC. If modified, the dam (and the concrete abutment walls) to be raised by about 1.5 feet. Once a decision is reached by DEC, the Glencliffe Retention Basin Dam Emergency Action Plan (prepared in 2016) will have to be	Yes	Yes	2 years	Village of Manlius and NYSDEC	\$1 million – \$3 million	Less risk of flooding; improved quality of life.	PDM/ HMGP/ FEMA / DEC	Moderate	SIP	SP



Table 9.20-12. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem	Description of Solution?	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
					updated accordingly.										
V. Manlius-3	Protect Brookdale Manlius Assisted Living to the 500-year flood level.	1, 3	Flood	The facility is located in the 100-year floodplain.	The town will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level.	Yes	None	Within 6 months	Facilities manager, town	<\$100	Facility protected to the 500-year flood level	HMGP	High	EAP, SIP	PI, PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

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

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.

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

Critical Facility:


Yes  Critical Facility located in 1% floodplain



Table 9.20-9.20-13. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
V. of Manlius-1	Deer Tick Management Program	1	0	1	1	0	1	1	1	1	1	0	1	0	1	10	High
V. of Manlius-2	Basin Dam Mitigation	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High

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



9.20.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.20.8 Staff and Local Stakeholder Involvement in Annex Development

The Village of Manlius followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many village departments, including the Mayor's Office and Village Administrator. The Mayor represented the community on the Onondaga 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.

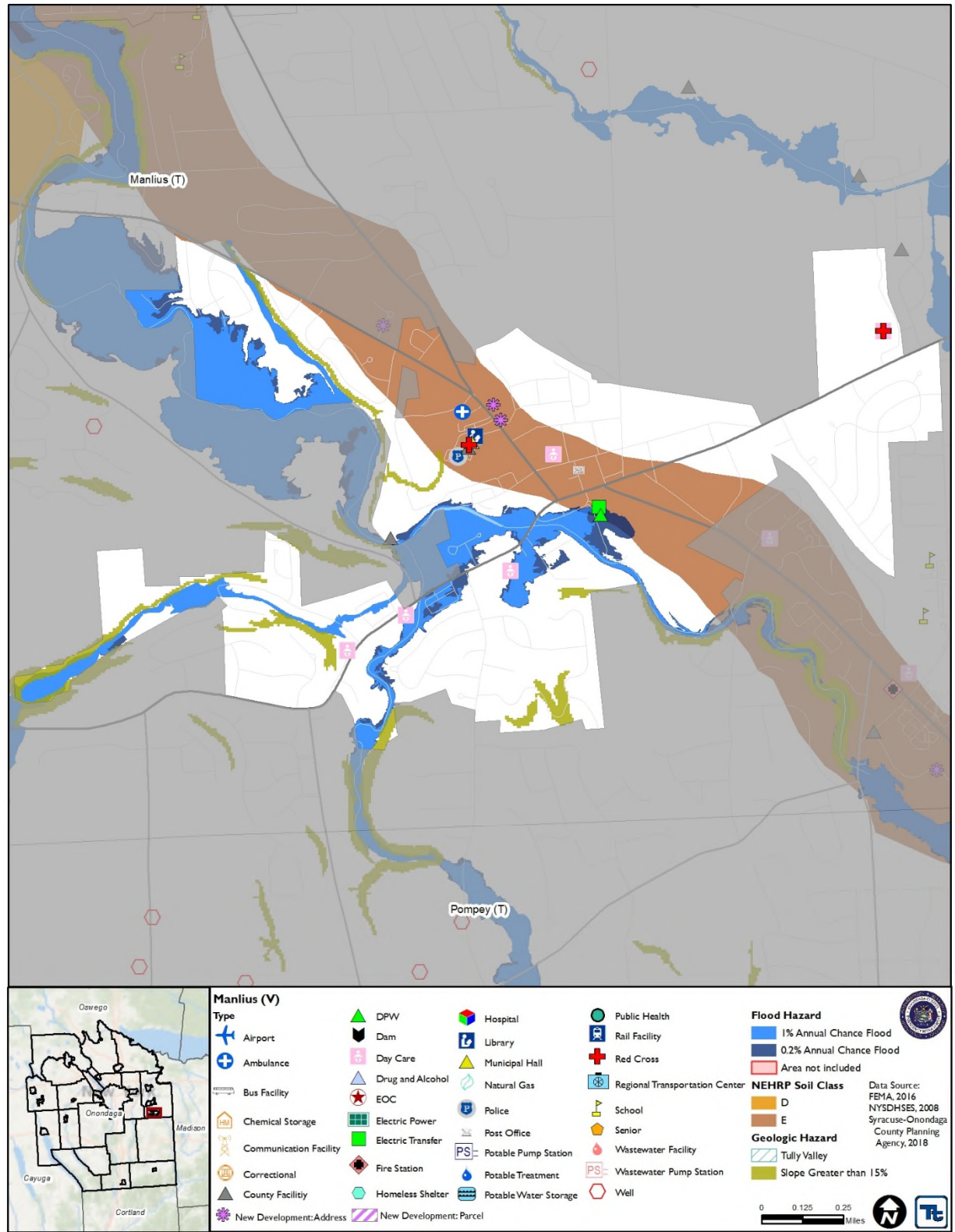
Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.20.9 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Village of Manlius 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. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Manlius has significant exposure. These maps are illustrated below.



Figure 9.20-1. Village of Manlius Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	Deer Tick Management Program		
Project Number:	V. of Manlius-1		
Risk / Vulnerability			
Hazard(s) of Concern:	Infestation		
Description of the Problem:	All R-1 Zoned Districts – restrictions on control of the deer population within the boundaries of the village has resulted in deer tick infestations. Without adoption of a local deer control policy, the deer population will continue to increase in residential neighborhoods.		
Action or Project Intended for Implementation			
Description of the Solution:	Neighboring communities have adopted a deer management program allowing for control of the deer populations with approvals sought and granted by NYSDEC. These programs have been successful however not without potential repercussions from animal rights activists. The Village of Manlius will seek to adopt those programs previously approved by NYSDEC with an added community education program.		
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:	Not applicable: Minimal	Estimated Benefits (losses avoided):	\$500,000
Useful Life:	2-3 years	Goals Met:	Reduce tick infestations
Estimated Cost:	\$20,000	Mitigation Action Type:	Environmental
Plan for Implementation			
Prioritization:	Highest concentrations of deer populations	Desired Timeframe for Implementation:	1 year – 1.5 year
Estimated Time Required for Project Implementation:	6 months – 1 year	Potential Funding Sources:	NYS/HM or HP
Responsible Organization:	NYSDEC/village	Local Planning Mechanisms to be Used in Implementation if any:	Local Planning Boards and public outreach
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Chemical treatment for ticks	\$250,000 - \$500,000	An outside study would be required to compile information to target deer/animal patterns
	Public Health Assistance	\$250,000 - \$350,000	An outside study would be required to and to create a public health assistance
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet	
Project Name:	Deer Tick Management Program
Project Number:	V. of Manlius-1



Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduction in the deer population will result in reduction in ticks and Lyme Disease
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	1	The village has the legal authority to complete the project.
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Invasive Species/Infestation
Timeline	1	
Agency Champion	0	
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Basin Dam Mitigation		
Project Number:	Village of Manlius-2		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Due to a longer and more complete record of regional and local rainfall events, the current 100-year peak design flood has increased compared to when the Glenclyffe Retention Basin Dam was originally designed. Therefore, the existing dam no longer meets the higher requirements for a Class B Intermediate Hazard Dam.		
Action or Project Intended for Implementation			
Description of the Solution:	Going forwards, dam modifications are necessary. Increase its size. Possible change to its spillway or the physical features of the existing dam. A hydrological study is needed for the dam.		
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:	To be determined.	Estimated Benefits (losses avoided):	Less risk of flooding; improved quality of life.
Useful Life:	50 years	Goals Met:	1, 3, 4, 5, 6
Estimated Cost:	1 million – 3 million	Mitigation Action Type:	Environmental/Construction/Infrastructure
Plan for Implementation			
Prioritization:	Moderate	Desired Timeframe for Implementation:	5 years
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	PDM/HMGP/FEMA Programs/DEC
Responsible Organization:	DEC/Mayor/DPW/Village Engineer	Local Planning Mechanisms to be Used in Implementation if any:	Emergency Action Plan; Village Park & Recreation Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	Culvert Modifications	\$2 million	An engineering study should be completed to determine which is most cost effective
	Retention Ponds	\$1 million	
	Underground Storage	\$3 million - \$5 million	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet



Project Name:	Basin Dam Mitigation	
Project Number:	Village of Manlius-2	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect human life from dam failure impacts.
Property Protection	1	Project will protect properties from dam failure impacts.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	The project will require financial assistance.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	
Agency Champion	1	Village Engineer
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	