

9.19 TOWN OF MANLIUS

This section presents the jurisdictional annex for the Town of Manlius.

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
David W. Tessier, Dir. of Planning and Development 301 Brooklea Drive Fayetteville, NY 13066 (315) 637-8619 dtessier@townofmanlius.org	Edmond J. Theobald, Supervisor 301 Brooklea Drive Fayetteville New York 13066 (315) 637-3414 etheobald@townofmanlius.org

B.) TOWN PROFILE

Population

32,330 (estimated 2007 U.S. Census)

Location

The Town of Manlius is located in the northeastern portion of Onondaga County, approximately 8 miles east of the City of Syracuse. It is bordered by the Town of Cicero to the north, the Town of DeWitt to the west, the Town of Pompey to the south, the Town of Sullivan to the east and the Town of Cazenovia to the southeast. The Village of Fayetteville is by the west town line at the junction of NY-257 and NY-5. The Village of Manlius is near the south town line at the junction of NY-92 and NY-173. The Village of Minoa is in the northern part of the town on NY-257. The major streams within the town are Limestone Creek, West Branch Limestone Creek, Butternut Creek and Chittenango Creek. The Erie Canal, which cuts across the town from east to west, crosses over Limestone Creek.

The New York State Thruway (Interstate 90) crosses the north part of Manlius. New York State Route 290 crosses the northwest corner of the town. New York State Route 5 (in part, Genesee Turnpike) and New York State Route 173 (Seneca Turnpike) are east-west highways. New York State Route 257 is a north-south state highway. New York State Route 92 (Cazenovia Road) is a northwest-southeast highway.

According to the U.S. Census Bureau, the town has a total area of 50.0 square miles (129.4 km²), with 49.6 square miles (128.5 km²) of it land and 0.3 square miles (0.9 km²) of it (0.68-percent) water.

Climate

Onondaga County generally experiences seasonable weather patterns characteristic of the northeastern U.S. Cyclonic systems and cold air masses affect the County's weather, making winters cold with snow. During the summer and parts of spring and autumn, temperatures rise during the daytime and fall rapidly after sunset. Summer temperatures typically range from about 76°F to 81°F (Fahrenheit). Winter high temperatures are usually in the middle to upper 30°F, with minimum temperatures of 14°F expected. Overall, the average high temperature for the County is approximately 57°F and the average low temperature is approximately 37°F. Snow accumulates to an average depth of 121 inches each year.

Brief History

The town was a township of the former Central New York Military Tract. Manlius is the name of several important Romans, but exactly which one was being honored is no longer known. The current town was first settled around 1790.

The Town of Manlius was created in 1794, along with Onondaga County, as a much larger entity, which was decreased by the formation, in part or in whole, of new towns (DeWitt, Onondaga, Salina) and part of Syracuse. It was bounded north by the township of Cicero, east by the Oneida Reservation, south by Pompey, and west by Onondaga Creek and Lake, including all the Onondaga Salt Springs Reservation north of the old Genesee Road and east of Onondaga Creek, comprising all the present towns of Manlius, DeWitt, part of Onondaga, and part of Salina, as laid out in 1809. It was reduced to its present limits in 1835. The economy related to trade generated by the Erie Canal contributed to the early development of the town.

Governing Body Format

The Town of Manlius is governed by a supervisor and six councilors.

Growth/Development Trends

Megnin Farms – This 85-lot residential subdivision, on the north side of Genesee Turnpike (Route 5), has been approved. Please see the enclosed map of the Town hazards for the location of this development, and its relationship to known natural hazard risk zones.

C.) NATURAL HAZARD EVENT HISTORY SPECIFIC TO THE TOWN

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Snowstorm / Extreme Cold	Not applicable	February, 1961	\$80,000 (countywide)
Flood	Not applicable	July, 1970	\$250,000 (countywide)
Snowstorm	Not applicable	March, 1971	\$806,000 (countywide)
Snowstorm / Extreme cold	Not applicable	February, 1972	\$803,000 (countywide)
Flood (Tropical Storm Agnes)	DR-338	June, 1972	\$1,600,000 (countywide)
Flood	Not applicable	March, 1973	\$200,000 (countywide)
Snowstorm	Not applicable	December, 1973	\$83,000 (countywide)
Severe Storms and Flooding	DR-447	July, 1974	\$7,200,000 (countywide)
Severe Storms, Heavy Rain, Landslides, Flooding	DR-487	September, 1975	\$6,300,000 (countywide)
Flood	Not applicable	April, 1976	\$313,000 (countywide)
Blizzard	Not applicable	January, 1977	\$2,100,000 (countywide)
Flood	Not applicable	October, 1981	\$833,000 (countywide)
Snowstorm / Extreme Cold	Not applicable	January, 1982	\$5,000 (countywide)
Tornado (F3)	Not applicable	May, 1983	\$2,500,000 (countywide)
Snowstorm	Not applicable	February, 1984	\$156,000 (countywide)

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Tornado (F1)	Not applicable	July, 1986	\$250,000 (countywide)
Blizzard and Extreme Cold	EM-3107	March, 1993	\$455,000 (countywide)
Snowstorm	Not applicable	April, 1993	\$100,000 (countywide)
Thunderstorm / Winds	Not applicable	August, 1993	\$600,000 (countywide)
Severe Storm and Flooding	DR-1095	January, 1996	\$7,600,000 (countywide)
Flood	Not applicable	November, 1996	\$100,000 (countywide)
Thunderstorm / Winds / Tornado	Not applicable	May, 1998	\$200,000 (countywide)
Flood	Not applicable	August, 1998	\$20,000 (townwide); one fatality
Thunderstorm / Winds	Not applicable	August, 1998	\$200,000 (countywide); uprooted trees; power outages
Severe Storm	DR-1244	September, 1998	\$90,000,000, 3 fatalities, 7 injuries (countywide)
Thunderstorm / Winds	Not applicable	July, 1999	\$750,000 (countywide)
Severe Storms	DR-1335	May/September, 2000	Not available
Snowstorms	Not applicable	December, 2002 / January, 2003	\$353,000 (countywide)
Flood	Not applicable	June, 2002	\$2,000,000 (countywide)
Snowstorm (President's Day Storm)	Not applicable	February, 2003	\$153,000 (countywide)
Lightning	Not applicable	March, 2003	\$50,000 (townwide)
Ice Storm	DR-1467	April, 2003	\$2,900,000 (countywide)
Severe Storms and Flooding	DR-1564	August / September 2004	\$2,000,000 (countywide); road closed or washed out; a golf course was flooded
Severe Storm and Flooding	Not applicable	April, 2005	\$100,000 (countywide); road closures and flooded basements
Flood	Not applicable	July, 2005	\$500,000 (countywide)
Lightning	Not applicable	August, 2005	\$50,000 (townwide)
Severe Storms and Flooding	Not applicable	June/July, 2006	\$29,000 (countywide)
Lake Effect Snowstorm / Extreme Cold	Not applicable	February, 2007	\$3,000,000 (countywide)

Number of FEMA Identified Repetitive Flood Loss Properties: 2

Number of FEMA Identified Severe Repetitive Flood Loss Properties: 0

Source: FEMA Region II, 2009

Note: Repetitive loss and severe repetitive loss data as of February 2009.



D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Rank #	Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a,c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
4	Earthquake	\$73,224,754 ^{c,e,g}	Rare	16	Low
2	Flood	\$62,363,000 ^{c,e}	Frequent	36	Medium
3	Ground Failure	\$100,000 ^{f,h}	Frequent	18	Low
1	Severe Storm	< \$50 ^{c,d,i}	Frequent	48	High
1	Severe Winter Storm	\$82,011,750 ^{c,d}	Frequent	48	High

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. High = Total hazard priority risk ranking score of 40 and above
Medium = Total hazard priority risk ranking of 20 - 39
Low = Total hazard risk ranking below 20
- c. The valuation of general building stock and loss estimates determined in Onondaga County were based on the default general building stock database provided in HAZUS-MH MR3 (RSMMeans 2006).
- d. Severe storm and severe winter storm hazard 500-year MRP loss estimate is structural value only; does not include the value of contents. For severe winter storm, the loss estimate is 5% of total general building stock value.
- e. Loss estimates for both structure and contents (500-year MRP for the flood hazard and 2,500-year MRP for the earthquake hazard).
- f. Approximately 63% of the Town's general building stock is located within the landslide hazard area.
- g. Earthquake loss estimates are reported and calculated by Census Tract; therefore results reported are for Manlius (T), Manlius (V), Minoa (V), and Fayetteville (V).
- h. Costs/losses reported by one homeowner at The Bluffs.
- i. Potential losses for severe storm are underestimated by HAZUS.

E.) CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification.

E.1) Legal and Regulatory Capability

Regulatory Tools (Codes, Ordinances., Plans)	Local Authority (Y or N)	Prohibitions (State or Federal) (Y or N)	Higher Jurisdictional Authority (Y or N)	State Mandated (Y or N)	Code Citation (Section, Paragraph, Page Number, date of adoption)
1) Building Code	Y	N	Y	Y	Ch. 59, 1991, Amended 2007
2) Zoning Ordinance	Y	N	N	N	Ch. 155, 1991, as Amended
3) Subdivision Ordinance	Y	N	N	N	Ch. 127, 1991, as Amended
4) NFIP Flood Damage Prevention Ordinance	Y	Y	Y	Y	Ch. 72, 2001
5) Growth Management	N	N	N	N	
6) Floodplain Management / Basin Plan	N	Y	Y	N	
7) Stormwater Management Plan/Ordinance	Y	N	N	Y	Ch. 126, 2007
8) Comprehensive Plan / Master Plan/ General Plan	N	N	N	N	
9) Capital Improvements Plan	Y	N	N	N	
10) Site Plan Review Requirements	Y	Y	Y	N	Ch. 155-28, as Amended
11) Open Space Plan	N	N	N	N	
12) Economic Development Plan	N	N	N	N	
13) Emergency Response Plan	Y	N	N	Y	2007
14) Post Disaster Recovery Plan	N	N	N	N	
15) Post Disaster Recovery Ordinance	N	N	N	N	
16) Real Estate Disclosure req.	N	N	Y	N	
17) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	Y				127-19 Design Standards for Lots, Steep Slope Ordinance adopted in 2006

E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Director of Planning and Development
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Engineer, Part Time Under Contract
3) Planners or engineers with an understanding of natural hazards	Y	Engineer, Part Time Under Contract
4) NFIP Floodplain Administrator	Y	David W. Tessier, Director of Planning and Development
5) Surveyor(s)	Y	Contracted
6) Personnel skilled or trained in "GIS" applications	Y	Planning Department
7) Scientist familiar with natural hazards in the Town of Manlius.	N	Various department representatives
8) Emergency Manager	Y	Town of Manlius Chief of Police
9) Grant Writer(s)	N	
10) Staff with expertise or training in benefit/cost analysis	N	

E.3) Fiscal Capability

Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
1) Community development Block Grants (CDBG)	No
2) Capital Improvements Project Funding	Yes
3) Authority to Levy Taxes for specific purposes	Yes
4) User fees for water, sewer, gas or electric service	Yes, Special Districts, Water, Sewer, Stormwater
5) Impact Fees for homebuyers or developers of new development/homes	Yes, Park Land Fees
6) Incur debt through general obligation bonds	Yes,
7) Incur debt through special tax bonds	No
8) Incur debt through private activity bonds	No
9) Withhold public expenditures in hazard-prone areas	No
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	No
11) Other	No

E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	NP	n/a
Building Code Effectiveness Grading Schedule (BCEGS)	-	-
Public Protection	-	-
Storm Ready	NP	n/a
Firewise	NP	n/a

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

The classifications listed above relate to the community's effectiveness in providing services that may impact its vulnerability to the natural 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 one (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
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

F.) PROPOSED HAZARD MITIGATION INITIATIVES

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
TMN-0	<p>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:</p> <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. <p>Municipal outreach activities to be supported by the County, as identified at County initiative OC-0.</p>							
	See above.	N/A	All Hazards	All Goals	Municipal officials and floodplain administrators supported by the County (through SOCPA and EM)	Low	County and Municipal Budgets; grant eligible for a defined outreach program	Short
TMN-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.	Existing	Flood, Severe Storm	1-1, 1-2, 1-6; 2-5, 2-6; 3-2, 3-5; 6-1	Municipality (likely through NFIP Floodplain Administrator)	High	FEMA Mitigation Grant Programs and local match	Long-term



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
TMN-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.	Existing	Flood, Severe Storm	1-1, 1-2, 1-6; 2-5, 2-6; 3-2, 3-5; 6-1	Municipality (likely through NFIP Floodplain Administrator)	High	FEMA Mitigation Grant Programs and local match	Long-term
TMN-2	Begin the process to apply to participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	NA	Flood, Severe Storms	1-1, 1-3, 1-7; Goal 2 – All Objectives	NFIP Floodplain Administrator with support from NYSDEC, SOEM, FEMA	Low	Municipal Budget	Short (year 1)
TMN-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	All Goals and Objectives	Municipality (through mitigation planning point of contacts)	Low	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing
TMN-4	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of	New & Existing	Flood	2-4; 3-5, 3-6	Municipality (likely through NFIP)	Low	Local Budget	Ongoing



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	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 TMN-0, 1a, 1b, 2, and 8 through 17.				Floodplain Administrator)			
TMN-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1-4; 5-5; Goal 6 – All Objectives	Municipal Emergency Manager with support from County OEM and SEMO	Low - Medium	Local Budget	Ongoing
TMN-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3-3; 5-2, 5-3, 5-5, 5-6; 6-5, 6-6	Local Emergency Management, DPW and Roads	Low - Medium	Local Budget	Ongoing
TMN-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All Goals and Objectives	Local departments (as applicable for specific initiative)	Low - Medium	Local Budget	Ongoing
TMN-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.	N/A	Flood, Severe Storms	1-3, 1-7; 2-3; 4-1,4-4; 5-1, 5-2, 5-3	County, OCSWCD (Mark Burger)	Medium	Local Budget	Short-term
TMN-9	Assist property owners with drainage	Existing	Flood, Severe	1-6, 1-7,	Town with	High	FEMA HMA	Short-term



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	issues to identify and apply for available mitigation grant funding for eligible mitigation activities		storms and related Land Failure	1-8; 2-1, 2-5, 2-6; 3-7; 5-6	participation and support of property owners		grants – local match from property owners	
TMN – 10	Continue to fund and participate in the log jam clearing program on the Chittenango Creek with the Town of Sullivan (Madison County)	N/A	Flood, Severe Storms	1-3, 1-7; 2-3; 4-1,4-4; 5-1, 5-2, 5-3	Local with the Town of Sullivan (Madison County)	Low (annually funded)	Local Budget	Ongoing
TMN – 11	Continue to fund stormwater basin maintenance – per local Stormwater Management Plan. Includes stormwater basin maintenance and mowing, and outfall repairs.	Existing	Flood, Severe Storms	1-2, 1-4, 1-6, 1-7, 1-8; 3-2, 3-4	Town	~40K / annually in operating budget for stormwater	Local Budget	Ongoing
TMN – 12	Continue to implement local drainage surveys through the town per the stormwater operating budget	Existing	Flood, Severe Storms	1-2, 1-4, 1-6, 1-7, 1-8; 3-2, 3-4	Town	~10K / annually in operating budget	Local Budget	Ongoing (5 year plan)
TMN-13	As identified in the 2006 Beartrap-Ley Creek Drainage District Study, continue to support existing maintenance and inspection activities of Ley Creek – North Branch and its culverts to ensure they remain clear of debris, structurally sound and operable.	N/A	Flood, Severe Storms	1-2, 1-6; 4-1, 4-2; 5-1	OC Dept of Water Environment Protection; Beartrap-Ley Creek Drainage District; Town	Low - Medium	County/ District/ Local Budgets	Ongoing
TMN-14	The Beartrap-Ley Creek Drainage District is flat and heavily urbanized making the lowest areas extremely vulnerable to rain-event flooding that approach or exceed 5-year storms. Conduct /support a more detailed topographic study in the critical areas to determine which individual properties are most at risk to assist	N/A	Flood, Severe Storms	1-2, 1-3; 5-1	OC Dept of Water Environment Protection; Beartrap-Ley Creek Drainage District; Town	Low-Medium	FEMA HMA; District/Cou nty/Local budgets	DOF



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	with determining mitigation actions.							
TMN-15	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	NA	Flood, Severe Storms	All Goals	NFIP Floodplain Administrator, with support from NYSDEC, SOEM, FEMA	Low	Municipal Budget	Short (year 1)
TMN-16	<p>Participate in RL/SRL property owner outreach and education activities, provided by FEMA, as initiated and coordinated by the County initiative OC-35, described herein.</p> <p>Within the first year of Plan adoption, request FEMA to conduct a mitigation workshop targeting those communities with significant numbers of flood vulnerable properties and Repetitive Loss/Severe Repetitive Loss (RL/SRL) properties (e.g. Towns of Cicero, DeWitt, Elbridge, Lafayette, Lysander, Manlius; Village of Skaneateles; City of Syracuse). This program should address the specific interests and concerns of these flood vulnerable communities in the County which includes:</p> <ul style="list-style-type: none"> Gaining a better understanding of the available mitigation grant programs, including the procedural requirements of a RL/SRL community under this program; Understanding how flood vulnerable and RL/SRL communities can enhance their efforts to encourage and support property owners to mitigate their properties, Understanding how flood vulnerable and RL/SRL communities can best leverage existing data, information and studies (e.g. NFIP data) to target specific properties for mitigation, and Learning what resources are available to conduct/complete Repetitive Loss Area Analyses, and gather critical data (e.g. structure elevations) to screen and move properties through the applicable mitigation grant programs. <p>The County shall promote this workshop through established groups and forums including the OC SWCD and the ongoing County Hazard Mitigation Planning Committee. Further, the County shall continue to conduct meetings as needed with these flood vulnerable communities, with the support of NYSOEM and FEMA, to assist communities as they work to address their flood vulnerable and RL/RSL properties.</p>							
	See description above	Existing	Flood, Severe Storm	1-1; 2-1, 2-5, 2-6; 3-6, 3-7; 5-4, 5-6	Local floodplain administrator working with County Hazard Mitigation Coordinator	L	Existing Budgets	Short (year 1)
TMN-17	Participate in regional, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including:							



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals / Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	<ul style="list-style-type: none"> Support the performance of enhanced risk and vulnerability assessments for hazards including flooding, earthquake, wind, and land failure. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. <p>Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types) based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies, or "Rapid Observation of Vulnerability and Estimation of Risk - ROVER. It is recognized that these programs will likely need to be initiated and supported at the Regional and/or State level, and will likely require training, tools and funding provided at the regional, state and/or federal level.</p>							
	See above.	Existing	All Hazards	1-2, 1-4, 1-6; 2-3; 3-2; 5-2, 5-3; 6-2, 6-3, 6-5	Local building code official and/or engineer working with OC EM	M-H	Regional funding; Mitigation grant programs (PDM or HMGP) with local match	Long

Notes: DOF = Depending on Funding. FEMA = Federal Emergency Management Agency. Long = 5 years or greater. N/A = Not applicable. Short = 1 to 5 years. TBD = To be determined

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure?



G.) ANALYSIS OF MITIGATION ACTIONS

This table summarizes the participant’s mitigation actions by hazard of concern and the six mitigation types to illustrate that the Town has selected a comprehensive range of actions/projects.

Hazard of Concern	Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	TMN-3, TMN-7	TMN-3, TMN-7	TMN-0, TMN-3, TMN-7, TMN-17	TMN-3, TMN-7	TMN-3, TMN-5, TMN-6, TMN-7, TMN-17	TMN-3, TMN-7
Flooding (riverine, flash, coastal and urban flooding)	TMN-2, TMN-3, TMN-4, TMN-7, TMN-8, TMN-13, TMN-14, TMN-15	TMN-1a and b, TMN-2, TMN-3, TMN-4, TMN-7	TMN-0, TMN-1a and b, TMN-2, TMN-3, TMN-4, TMN-7, TMN-16, TMN-17	TMN-3, TMN-7, TMN-8, TMN-13	TMN-2, TMN-3, TMN-5, TMN-6, TMN-7, TMN-17	TMN-3, TMN-7
Ground Failure	TMN-3, TMN-7	TMN-3, TMN-7	TMN-0, TMN-3, TMN-7, TMN-17	TMN-3, TMN-7	TMN-3, TMN-5, TMN-6, TMN-7, TMN-17	TMN-3, TMN-7
Severe Storms (windstorms, thunderstorms, hail, lightning and tornados)	TMN-2, TMN-3, TMN-4, TMN-7, TMN-8, TMN-13, TMN-14, TMN-15	TMN-1a and b, TMN-2, TMN-3, TMN-4, TMN-7	TMN-0, TMN-1a and b, TMN-2, TMN-3, TMN-4, TMN-7, TMN-16, TMN-17	TMN-3, TMN-7, TMN-8, TMN-13	TMN-2, TMN-3, TMN-5, TMN-6, TMN-7, TMN-17	TMN-3, TMN-7
Severe Winter Storm (heavy snow, blizzards, ice storms)	TMN-3, TMN-7	TMN-3, TMN-7	TMN-0, TMN-3, TMN-7, TMN-17	TMN-3, TMN-7	TMN-3, TMN-5, TMN-6, TMN-7, TMN-17	TMN-3, TMN-7

Notes:

- 1. Prevention:** Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- 2. Property Protection:** 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.
- 3. Public Education and Awareness:** 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 school-age and adult education programs.
- 4. Natural Resource Protection:** 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.
- 5. Emergency Services:** 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.
- 6. Structural Projects:** 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.

H.) PRIORITIZATION OF MITIGATION INITIATIVES

Initiative #	# of Objectives met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
TMN-0	38	M	L	Y	Y (for defined outreach project)	Y	H
TMN-1a	8	H	H	Y	Y	N	M-H*
TMN-1b	8	H	H	Y	Y	N	M-H*
TMN-2	9	M	L	Y	N	Y	H
TMN-3	38	M	M	Y	N (Yes for 5 year update)	Y	H
TMN-4	3	H	L	Y	N	Y	H
TMN-5	8	M	L	Y	N	Y	H
TMN-6	7	M	L	Y	N	Y	H
TMN-7	38	M-H	L-M	Y	Dependant on specific initiative	Dependant on specific initiative	M-H (dependant)
TMN-8	8	H	L - H	Y	Y	Dependant on specific initiative	M
TMN-9	8	H	H	Y	Y	Y (local match)	M
TMN-10	8	M	L	Y	Y	Y	H
TMN-11	7	M	L	Y	N	Y	H
TMN-12	7	M	L	Y	N	Y	H
TMN-13	5	M	L - M	Y	N	Y	H
TMN-14	3	M	L-M	Y	Y	Local Match Dependant on specific initiative	M
TMN-15	38	L	L	Y	N	TBD	M
TMN-16	8	M	L	Y	N	Y	H
TMN-	8	M-H	M-H	Y	Y	N	M

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Notes: H = High. L = Low. M = Medium. N = No. N/A = Not applicable. Y = Yes.

* This initiative has a "Medium" priority based on the prioritization scheme used in this planning process (implementation dependent on grant funding), however it is recognized that addressing repetitive and severe repetitive loss properties is considered a high priority by FEMA and SEMO (as expressed in the State HMP), and thus shall be considered a "High" priority for all participants in this planning process.

Explanation of Priorities

- **High Priority** - A project that meets multiple objectives (i.e., multiple hazards), benefits exceeds cost, has funding secured or is an on-going project and project meets eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation Grant Program (PDM) programs. High priority projects can be completed in the short term (1 to 5 years).
- **Medium Priority** - A project that meets goals and objectives, benefits exceeds costs, funding has not been secured but project is grant eligible under, HMGP, PDM or other grant programs. Project can be completed in the short term, once funding is completed. Medium priority projects will become high priority projects once funding is secured.
- **Low Priority** - Any project that will mitigate the risk of a hazard, benefits do not exceed the costs or are difficult to quantify, funding has not been secured and project is not eligible for HMGP or PDM grant funding, and time line for completion is considered long term (1 to 10 years). Low priority projects may be eligible other sources of grant funding from other programs. A low priority project could become a high priority project once funding is secured as long as it could be completed in the short term.

Prioritization of initiatives was based on above definitions: Yes

Prioritization of initiatives was based on parameters other than stated above: Not applicable.

I.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

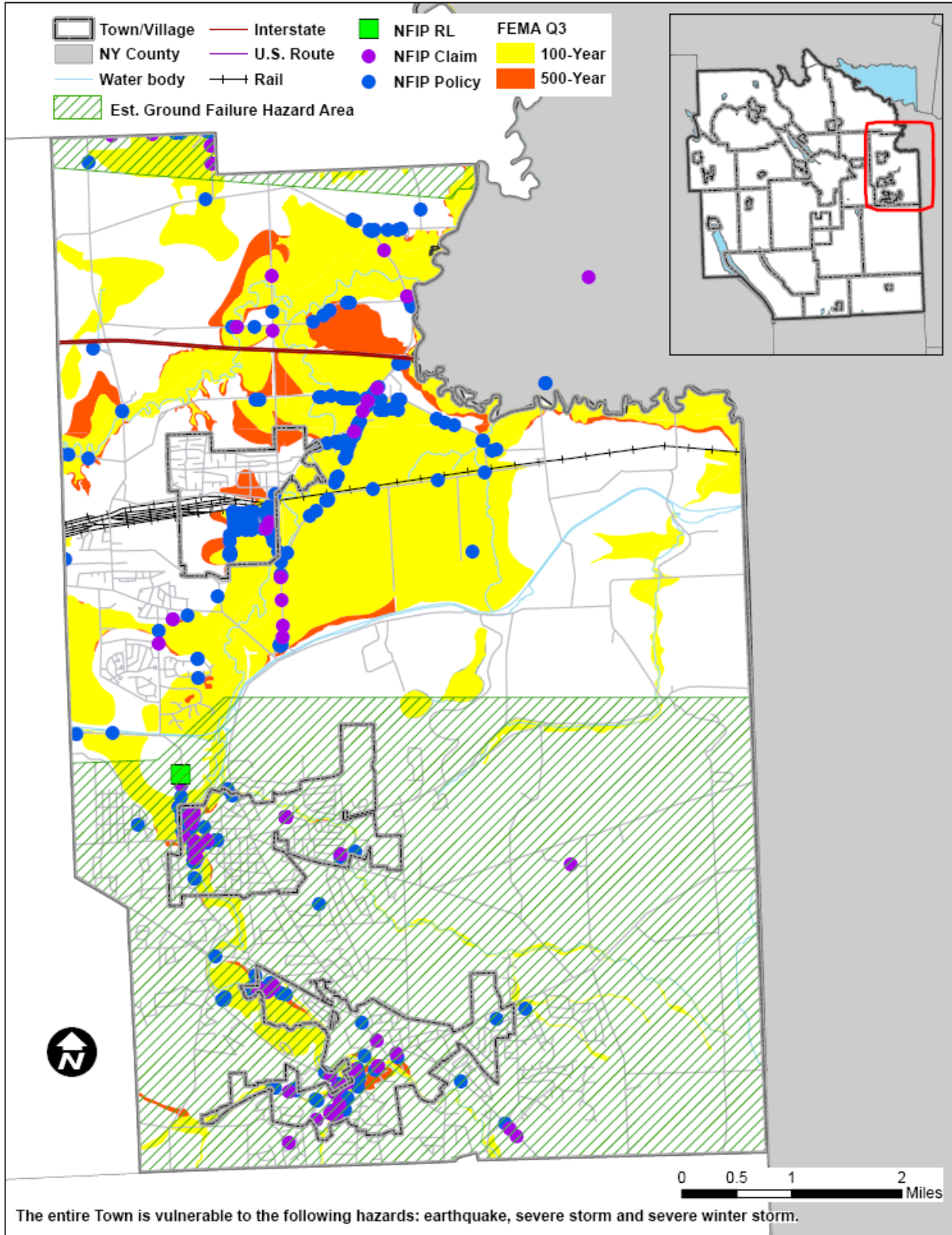
None at this time.

J.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated and is provided below for the Town of Manlius to illustrate the probable areas impacted within the Town. This map is based on the best available data at the time of the preparation of this Plan, and is considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Manlius has significant exposure. The County maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.

K.) ADDITIONAL COMMENTS

No additional comments at this time.



Sources: FEMA Q3; FEMA Region II, 2008; HAZUS-MH MR3; NYSDPC, 2008

Notes: Est. = Estimated; NFIP = National Flood Insurance Program; RL = Repetitive Loss

The entire municipality is vulnerable to the following hazards: earthquake, severe storm, and severe winter storm.