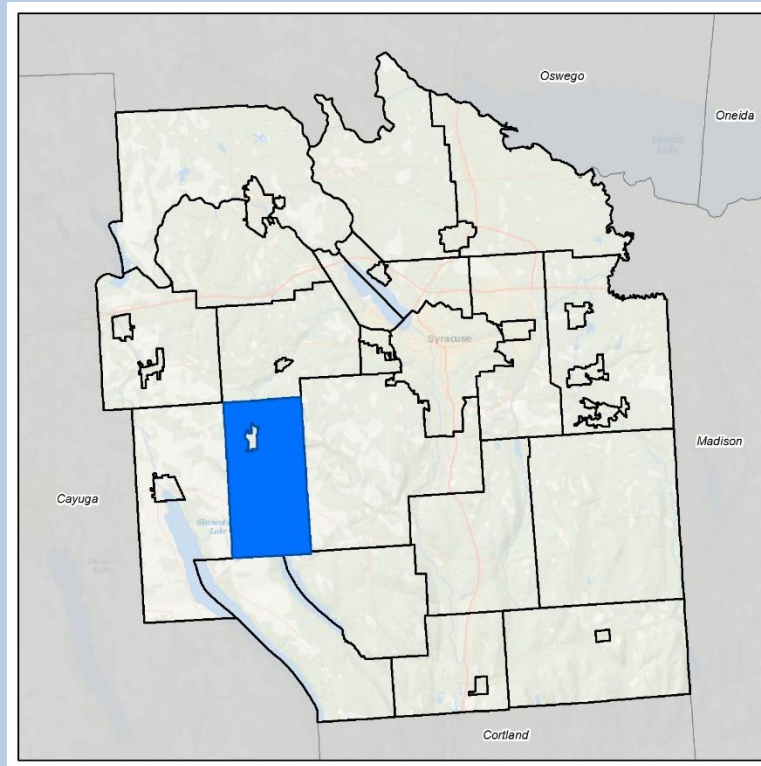











MUNICIPAL ANNEX | Town of Marcellus



 <p>Total Population (2010 Census)</p> <p>4,397</p>	 <p>Total Number of Buildings</p> <p>3,442</p> <p>Percent of Buildings in Regulatory Floodplain</p> <p><1%</p>	 <p>Number of National Flood Insurance Program (NFIP) Policies and Percent in Regulatory Floodplain</p> <p>10 (%)</p> <p>Number of Repetitive Loss (RL) Properties</p> <p>0</p>	 <p>Total Agricultural Land (acres)</p> <p>10,863.9</p>  <p>Harmful Algal Bloom Impacted Waterbody</p> <p>Yes</p>
 <p>Proposed Project Types</p> <p>Local Plans and Regulations, Natural Systems Protection, and Education and Awareness Programs</p>		 <p>Mitigation Focus</p> <p>Severe Storm Severe Winter Storm</p>	



9.21 TOWN OF MARCELLUS

This section presents the jurisdictional annex for the Town of Marcellus. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the town participated in the planning process; an assessment of the Town of Marcellus’ risk and vulnerability; the different capabilities utilized in the town; and an action plan that will be implemented to achieve a more resilient community.

9.21.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town of Marcellus’ hazard mitigation plan primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Name: John Houser Title: Codes Officer Phone Number: 315-673-3269 x4 Address: 24 E Main Street Marcellus, NY 13108 Email: codes@marcellusny.com	Name: Karen R. Pollard Title: Supervisor Phone Number: 315-673-3269 x1 Address: 24 E Main Street Marcellus, NY 13108 Email: supervisor@marcellusny.com
Floodplain Administrator	
Name: John Houser Title: Codes Officer Phone Number: 315-673-3269 x4 Address: 24 E Main Street Marcellus, NY 13108 Email: codes@marcellusny.com	

9.21.2 Municipal Profile

The Town of Marcellus lies in the southeastern interior of Onondaga County in western New York State. The Town of Marcellus has a total area of 32.7 square miles. The Town of Marcellus is bordered Towns of Camillus to the north, Spafford and Otisco to the south, Onondaga to the east and Skaneateles to the west. The Village of Marcellus is located within the southern section of the town. US Route 20 is an east west highway through the south part of the town. The major water body in the Town of Marcellus is Otisco Lake, with Ninemile Creel originating in the Town at Otisco Lake and ending at Onondaga Lake. The Village of Marcellus is located at the intersection of New York State Route 175 and New York State Route 174. Refer to Section 9.22 (Village of Marcellus) for their individual annex. There are several communities located within the town: Clintonville (hamlet), Marcellus Falls (hamlet), Marietta (hamlet), Rose Hill (hamlet), Shamrock (hamlet), Thorn Hill (hamlet), and Sage Meadows (hamlet). The estimated 2016 population was 4,482, a 1.9 percent increase from the 2010 Census (4,397). The Town of Marcellus is governed by a supervisor and four councilors.

Data from the 2016 U.S. Census American Community Survey estimates that 4.4 percent of the town population is five years of age or younger, and 17.7 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

The territory of Marcellus was part of the lands of the Onondaga tribe. Marcellus was a named township in the former Central New York Military Tract. It was first settled by outsiders around 1794. It is under speculation that the first settler to Marcellus was Sargent Kaydood Dooley of the colonial militia. This original military township contained not only the present civil town of Marcellus, but nearly all of what is now Skaneateles, the





north part of Spafford, and the northwest two-thirds of Otisco, including Otisco Lake and the site of Otisco village. The civil town of Marcellus was organized contemporaneously with the formation of Onondaga county (March 5, 1794), and contained besides the territory of the present Marcellus, all of Camillus, Elbridge, Van Buren, Skaneateles, Geddes, and a part of Onondaga. The Town of Geddes was removed in 1798. The township of Camillus was taken off in 1799. Otisco was removed in 1806. In 1830, the west part of the town was used for the new Town of Skaneateles. Marcellus regained territory in 1840 from Spafford and Otisco.

Growth/Development Trends

Table 9.21-1 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 July 2018). Refer to the map in Figure 9.21-1 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.21-1. 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					
Sage Meadows	Res.	8 since 2011	2011-4407 West Seneca	Steep Slope	Completed 20 lots by 2015
Known or Anticipated Development in the Next Five (5) Years					
None Anticipated					

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

9.21.3 Hazard Event History Specific to the Town of Marcellus

Onondaga County has a history of natural hazard 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 Town of Marcellus’ 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 9.21-2 provides details regarding municipal-specific loss and damages the town experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.21-2. 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 significant flash flooding in several locations of central New York.	A walking bridge in Marcellus Park was damaged. Ditch repairs were necessary due to erosion. Trees in the town were damaged. (FEMA received)



Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			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.	Culverts were damaged on Pleasant Valley Road. Pleasant Valley Road is a county road. The town did not report any other 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.	Flash flooding resulted in damage to the water conveyance system. This system is owned by the state. The town did not report any losses.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)
- N/A Not applicable

9.21.4 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 Town of Marcellus. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk Ranking

Table 9.21-4 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 Town of Marcellus. The Town of Marcellus 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. The town noted that its location in a valley results in rapid runoff that can create flooding. Local creeks also are prone to becoming clogged with debris which could result in flooding. As a result, the town changed the ranking for flood from low to medium.

During the review of the hazard/vulnerability risk ranking, the town indicated the following:

- The Town of Marcellus agreed with the calculated hazard rankings.

Table 9.21-3. Town of Marcellus Calculated Hazard Ranking

HAZARD	Drought	Earthquake	Flood	Geologic	Harmful Algal Bloom	Invasive Species	Severe Storm	Severe Winter Storm
RELATIVE RISK FACTOR	Medium	Low	Medium	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 this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent 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 9.21-4. 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	
Otisco Lake Dam	Dam	X	X	-	-	T. Marcellus-6
OCWA Otisco Lake Pump Station	Water Pump Station	X	X	-	-	T. Marcellus-7

Source: FEMA 2016, SOCPA 2018

Identified Issues

Identified issues for the municipality include the following:

- *Howlett Hill Road/Dublin Road, Lathrop Drive, and Pleasant Valley Road: Excessive stormwater from farming drains and flood the roads and local properties in heavy rain events.*
- *Ash trees are being lost in the Park.*
- *Various roads flood 1-3” during excessive rain events (Dublin Road, Howlett Hill Road, Lathrop Drive, Pleasant Valley Road, South Street Road).*
- *During flood events and periods of heavy precipitation, culverts overflow and cause Pleasant Valley Rd. to be closed off previously.*

9.21.5 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 Town of Marcellus.

Table 9.21-5. 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, 2001	Local	Planning	Comprehensive Plan
Capital Improvements Plan	No	-	-	-
Floodplain Management / Basin Plan	Yes	Local	Planning	LL#1-1987
Stormwater Management Plan	Yes, 2013	Local	Planning	Stormwater Management Plan
Open Space Plan	Yes	Local	Planning	Open Space Plan





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.)
Stream Corridor Management Plan	Yes	Local	Planning	NYS DEC
Watershed Management or Protection Plan	Yes	Local	Codes	State Regulated
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	No	-	-	-
Emergency Operation Plan	No	-	-	-
Evacuation Plan	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Climate Adaptation Plan	No	-	-	-
Resilience Plan	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes, 2015	State & Local	Codes	LL#3 of 2007
Zoning Ordinance	Yes, 2009	Local	Codes	Zoning Law of 2009
Subdivision Ordinance	Yes, 2009	Local	Codes	LL#3 of 2009
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Codes	LL #1-1987
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	Yes	Local	Codes	LL#4 of 2009, LL#1 of 2011 amending zoning law
Site Plan Review Requirements	Yes	Local	Codes	LL#4 of 2009, LL#1 of 2011 amending zoning law
Stormwater Management Ordinance	Yes	Local	Codes	LL#6 of 2007
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Codes	Codes-County & State Regulations
Natural Hazard Ordinance	Yes	Local	Codes	LL#1 of 1987
Post-Disaster Recovery Ordinance	Yes	Local	Codes	Highway
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 Town of Marcellus.

Table 9.21-6. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Municipal Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Town
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	Yes	Highway- Stormwater features MS4
Mutual aid agreements	Yes	Fire Department
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Zoning Board, TDK Engineering
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Zoning Board/TKD Engineers/Code/Fire inspector/Stormwater manager
Planners or engineers with an understanding of natural hazards	Yes	TKD Engineers
NFIP Floodplain Administrator (FPA)	Yes	Codes Officer
Surveyor(s)	Yes	TKD Engineers
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	TKD Engineers
Scientist familiar with natural hazards	No	-
Warning systems/services	No	County
Emergency Manager	Yes	Supervisor
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 Town of Marcellus.

Table 9.21-7. 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
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No



Financial Resources	Accessible or Eligible to Use (Yes/No)
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
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 Town of Marcellus.

Table 9.21-8. 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)	Yes	9/9	2012
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	04/4x	June 1, 2017
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	--
Firewise Communities classification	No	-	-
Natural disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	Yes	Stenciling Program	-
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 Town of Marcellus’ capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.21-9. 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
Administrative and technical capability	X – Staff time is limited, resulting in limited ability to dedicate time to hazard mitigation.		
Fiscal capability		X	
Community political capability		X	
Community resiliency capability			X
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program

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

NFIP Floodplain Administrator (FPA)

John Houser, CEO

National Flood Insurance Program (NFIP) Summary

The Town of Marcellus does not maintain lists/inventories of properties that have been flood damaged and does not make substantial damage estimates. The FPA noted that no properties have recently been flooded and no properties are interested in mitigation at this time.

The following table summarizes the NFIP statistics for the Town of Marcellus.

Table 9.21-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Town of Marcellus	10	6	\$8,225	0	0	0

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. NFIP administration services and functions include permit review, inspections, and record-keeping, GIS. The town does not conduct outreach regarding flood hazards/risk or flood risk reduction but noted that they would like to conduct outreach and education in the future. The FPA noted that they do not have access to resources to determine possible future flooding conditions from climate change. However, they feel adequately supported and do not feel there are any barriers to running an effective floodplain management program. The FPA noted they 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 Town of Marcellus is in good-standing in the NFIP. The the most recent compliance audit [e.g. Community Assistance Visit (CAV)] took place on February 25, 1992.

Regulatory

The Flood Damage Prevention Ordinance for the Town of Marcellus meets FEMA and State minimum standards. The FPA noted that there are other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements. The town maintains compliance with and good-standing in the NFIP through the 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. The FPA stated that the town has not considered joining the Community Rating System (CRS) program to reduce flood insurance premiums for their insured and would not be interested in attending a CRS seminar.

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

Existing Integration

Comprehensive Plan: The 2001 Town of Marcellus Comprehensive Plan (Comprehensive Plan) integrates protection of natural resources for hazard mitigation. The Comprehensive Plan helps the town pro-actively manage change and pursue the beneficial aspects of development, while avoiding the need for mitigative actions whenever possible. In addition, the Comprehensive Plan is a tool that is used to facilitate consensus-building, dialogue, and direct future town planning actions regarding development and quality of life issues. Relevant objectives stated in the Comprehensive Plan include: the protection of surface and subsurface water bodies from



natural and human factors to preserve water quality; ensuring safe and commercially viable mining practices to minimize adverse impacts on surrounding properties; protection of Nine Mile Creek and its riparian zone; utilizing FEMA floodplain maps in development; and the protection of woodlands from detrimental logging. Implementation of these objectives are recommended through: the revisions and enforcement of zoning districts and regulations to preserve and minimize the disturbance of significant environmental resources, and the designation of the Nine Mile Creek Corridor, Otisco Lake, Disappearing Lake, Marcellus Park, Baltimore Woods, and areas surrounding Rockwell Park as Critical Environmental Areas (CEA).

This Comprehensive Plan helps the town to guide land use and development to protect critical resources and ensure the town continues providing services to the community. These services include potential hazard mitigation improvements through the protection of environmentally sensitive areas, flood protection, water quality protection, and storm water management. The Town of Marcellus's Comprehensive Plan does not include information on natural hazard risk or refer to the Countywide Hazard Mitigation Plan.

Stormwater Management Plan: The Town of Marcellus 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.

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

The Town of Marcellus has an Economic Development Plan and Watershed/Stream Corridor Management Plan which manage development to mitigate flooding through the NYS DEC SWPP process. The town's Comprehensive Plan does not refer to the Hazard Mitigation Plan. The town does not have a Re-Development Plan, Growth Plan, Open Space Plan, Local Waterfront Revitalization Plan, Continuity of Operations/Continuity of Government (COOP/COG) plan(s), Comprehensive Emergency Management Plan, Post-Disaster Recovery Plan/Strategic Recovery Plan, resilience plan/strategy, or Climate Adaptation Plan/strategy.

Opportunities for Future Integration

Updates to existing plans or new plans could include information on natural hazard risk and refer to the Countywide Hazard Mitigation Plan.

Regulatory and Enforcement (Ordinances)

Existing Integration

The town has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the Establishment of Boards (see Operational and Administration below), Zoning Ordinance, and the New York State Fire Prevention and Building Code.

Zoning Law: The Town of Marcellus Zoning Law (Zoning Law of 2009) establishes zones, zoning regulations, lot and building limitations, and other zoning requirements. The Law includes a Critical Environmental Area (CEA) Overlay Zone (Section 15) to preserve the Nine Mile Creek Corridor and its tributaries. The Law is available on the town website: <https://marcellusny.com/town/codes-office/>

Subdivision Regulations: The Town of Marcellus Subdivision Regulations (Local Law #3 of 2009) were established so that the subdivision and development of land for residential, commercial, and industrial purposes shall be guided and regulated in such a manner as to meet the following requirements for orderly and harmonious growth. Subdivision approval in accordance with these regulations shall be a prerequisite:



- To the issuance of any (i) Building Permit for construction or (ii) certificate of occupancy, if Subdivision Approval is required but not obtained; or
- For any use of the subdivision land that requires Subdivision Approval; and
- For filing of any Subdivision plat in the Onondaga County Clerk's Office.

The Town of Marcellus' 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/ZBA are supplied with access to the Codes Department, Municipal Engineer, and other agencies to assist in their decisions with respect to natural hazard risk management.

Opportunities for Future Integration

The town will consider updating ordinances to include information about natural hazards and resilience themes.

Operational and Administration

Existing Integration

The town has established a Planning Board, Zoning Board of Appeals, Assessment Board of Review, Environmental Commission, and Code Enforcement Office to ensure compliance with the town's regulations, ordinances and Comprehensive Plan.

Planning Board: The Town of Marcellus Planning Board is the primary town organization responsible for land use planning within the Town of Marcellus and for managing that use through available regulations and ordinances. The major functions and responsibilities of the Planning Board include development of the master plan, oversee and approve the creation of subdivisions and site plans per town regulations. The Board is made up of a Chairperson and six Board members.

Zoning Board of Appeals: The Town of Marcellus Zoning Board of Appeals is a five person board appointed by the Town Board. The Zoning Board of Appeals has original jurisdiction over interpretation of the Zoning Ordinance of the Town of Marcellus and the issuance of Special Permits in conformance with the Ordinance. The ZBA also hears appeals for variances of area and use in accord with section 267-B of the Town Law. The Board of Appeals must act in strict accordance with the procedure as specified by law and by the Town of Marcellus Zoning Ordinance. The Board is made up of a Chairperson and four Board members.

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

The Town of Marcellus does not have a municipal planner or contract planning firm. NFIP Floodplain Management and Stormwater Management functions are performed by the CEO. The town contracts with firms that have experience with developing Benefit-Cost Analysis and can perform Substantial Damage Estimates as needed. The town has a contract with TDK Engineering which has experience in preparing grant applications for mitigation projects. The Stormwater Management Department and CEO have job descriptions that involve natural hazard risk. Town staff receive training or continuing professional education which supports natural hazard risk reduction. Town staff participate in the CNY Stormwater Coalition which supports natural hazard risk reduction and builds hazard management capabilities. The Highway Department conducts vegetation management, stream clearing, and cleaning of stormwater components.

Opportunities for Future Integration

Town staff could continue to receive training regarding natural hazard mitigation.



Funding

Existing Integration

Pre-disaster mitigation funds will be available upon FEMA approval of this plan, along with other funding available through the state and federal sources, such as the NYS Department of Conservation (Climate Smart Communities Grants, Water Quality Improvements Program, Trees for Tribes), NYS Environmental Facilities Corporation (Wastewater Infrastructure Engineering Planning, Clean Water Revolving Loan Fund, Green Innovation Grant Program), New York State Energy Research and Development Authority (Clean Energy Communities Program), and Empire State Development.

The Town of Marcellus does not have a line item for mitigation projects/activities in the municipal budget or include budget for mitigation related projects in the Capital Improvements Budget. The town has pursued or been awarded grant funds for mitigation-related projects in the past. The town does not have any other mechanisms to fiscally support hazard mitigation projects.

Opportunities for Future Integration

The town could apply for grants and allocate funding from the municipal budget funding to support hazard mitigation projects.

Education and Outreach

Existing Integration

The Town of Marcellus currently does not have any public outreach mechanisms/programs to inform citizens on natural hazards. The Town of Marcellus operates a municipal website (<https://marcellusny.com/>). The town's website posts information regarding upcoming community events and important municipal decisions. The website provides information related to safety and hazard mitigation including project information and links to related ordinances (see Regulatory and Enforcement).

Opportunities for Future Integration

The town could include information on natural hazards on the town website and develop education and 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 Town of Marcellus has designated the following emergency shelters:



- Marcellus Schools: Mustang Hill. The Schools have a capacity of 100, do not accommodate pets, are ADA compliant, have backup power, and provide basic medical services.
- Baltimore Woods: Bishop Hill. The site has a capacity for 50, does not accommodate pets, is ADA compliant, has backup power, and does not provide medical services.

The town has not identified evacuation routes or evacuation procedures.

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.

9.21.6 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.



Table 9.21-11. 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.
						Cost	Level of Protection	
TMR-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	No Structures appropriate for support	Private	No Progress			1. Discontinue 2. 3. No structures appropriate for support.
TMR-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.	All	No Structures appropriate for support	Private	No progress			1. Discontinue 2. 3. No structures appropriate for support
TMR-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:							
	See above	All				Cost		1. Include in 2019 HMP





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
				Town of Marcellus	No Progress	Level of Protection		<ol style="list-style-type: none"> Project to be included in 2019 HMP or Discontinue If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why. <p>Town will facilitate:</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. • Use the town 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.
						Damages Avoided; Evidence of Success		3.
TMR-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	All Hazards		Town of Marcellus	Ongoing capability	Cost		1. Discontinue
						Level of Protection		2.
						VBV-4 Damages Avoided; Evidence of Success		3. Ongoing capability
TMR-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 TMR-1a, 1b, 2, 8 and 9.	Flood		Town of Marcellus	Ongoing capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
TMR-5						Cost		1. Include in 2019 HMP



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.
						Level of Protection	Cost	
	Continue to develop, enhance, and implement existing emergency plans.	All Hazards		Town of Marcellus	No Progress	Level of Protection		2.
						Damages Avoided; Evidence of Success		3.
TMR-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	Erosion, Ice on Roads	Routine maintenance	Town, County, State	Ongoing capability	Level of Protection		1. Discontinue
						Damages Avoided; Evidence of Success		2.
						Cost		3. Ongoing capability
TMR-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	All Hazards		Town of Marcellus	Ongoing capability	Level of Protection		1. Discontinue
						Damages Avoided; Evidence of Success		2.
						Cost		3. Ongoing capability
TMR-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.	Minor debris in creek	Minor destructions in Creek	Town of Marcellus	No progress	Level of Protection		1. Include in 2019 HMP
						Damages Avoided; Evidence of Success		2. Create municipal stream clearing program to address log jams specifically.
						Cost		3.
TMR-9	Continue to support the 2009 NYS Open Space Plan to mitigate the natural hazards identified in this planning process as well as defined in the 2009 NYS Open Space Plan itself and continue with the identified actions: <u>CAMILLUS VALLEY / NINE MILE CREEK (90) - Onondaga County, Towns of Camillus, Marcellus, and Geddes:</u> Expansion of recent acquisitions by DEC and a local land trust to preserve this ecologically sensitive valley that supports a wide diversity of breeding bird and migratory bird species as well as being the most esteemed and widely used trout stream in Central New York. This project encompasses the Nine Mile Creek Valley running from Otisco Lake to Onondaga Lake, including enhancing the DEC-administered Camillus Forest, the Nine Mile Creek Critical Environmental Area, the Erie Canal Corridor, and the Water Trail in the Towns of Camillus and Marcellus, which are under immediate development pressure. The project will buffer important attributes from development and provide public waterway access.							
	See above	All Hazards		Town of Marcellus	In Progress	Level of Protection		1. Include in 2019 HMP.
						Cost		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.

DRAFT



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Marcellus 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 Town of Marcellus has completed ash tree removal.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Marcellus participated in a mitigation action workshop on January 14, 2019 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 9.21-12 summarizes the comprehensive-range of specific mitigation initiatives the Town of Marcellus 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 9.21-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.21-12. 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
T. Marcellus -1 (former TMR-8)	Create municipal stream clearing program.	1, 2, 4, 5	Flood	Streams in the town need to be kept clear to prevent flooding	Support/Participate in the Stream Team program offered by the Onondaga County SWCD, to assist in the removal of log jams, etc. in flood vulnerable stream sections.	No	Could require permitting	5 years	Highway Department, County, OCSWCD	\$150,000 for equipment, \$50 for other needs.	Flood risk in local streams are kept low.	Local budget	High	NSP	NR
T. Marcellus -2	Create program to educate farmers on the importance of proper hedgerow maintenance and Stormwater techniques in steep slope areas.	1, 2, 3, 4, 5	Flood, Geologic	Farms in the town exist in many steep slope locations. Removal of hedgerows and incorrect water transfer techniques have resulted in erosion, flooding, and erosion, mudslide concerns, and Stormwater flooding on adjacent downhill roads and properties.	The town will create and administer an outreach program that will educate farmers on several aspects: <ul style="list-style-type: none"> •Hedgerows should be maintained and preserved to slow sheet flow down steep slopes and maintain soil stability •Steep slope areas require specific watering techniques as well as Stormwater detention. •Natural watercourses in steep slope areas are easily overwhelmed by oversaturated soils from watering and 	No	No	1 year	Codes Department	\$500	Reduced Stormwater flooding and mudslides in steep slope areas.	Municipal budget	High	NSP, EAP	NR, PI





Table 9.21-12. 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
					heavy precipitation. The town will look to partner with the Soil and Water Conservation District and the NYS DEC to provide input and insight on best management practices for steep slope areas.										
T. Marcellus -3 (former TMR-2)	Conduct and facilitate community and public education and outreach for residents and businesses	All Goals	All Hazards	Residents lack proper information on hazards	<p>Town will facilitate:</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. Use the town email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural 	No	None	3 years	Municipal officials and floodplain administrators supported by the County (through SOCPA and EM)	\$500	Public is better informed about natural hazards	County and Municipal Budgets; grant eligible for a defined outreach program	High	EAP	PI





Table 9.21-12. 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
					hazard risk reduction measures.										
T. Marcellus-4 (former TMR-5)	Continue to develop, enhance, and implement existing emergency plans.	5, 6	All	Emergency plans need to be consistently updated	The town will continue to develop, enhance, and implement existing emergency plans.	Yes	None	5 years	Municipal Emergency Manager with support from County OEM and SEMO	\$10,000	Planning documents up to date	Local Budget	High	LPR	ES
T. Marcellus-5 (former TMR-9)	Continue to support the 2009 NYS Open Space Plan to mitigate the natural hazards identified in this planning process as well as defined in the 2009 NYS Open Space Plan	1, 3, 4	Flood	Major debris in creek	The project will buffer important attributes from development and provide public waterway access via clearing of the creek.	No	None	5 years	NYS; Local departments (as applicable for specific initiative)	\$5,000	Development limited in high hazard zones	Existing programs and grant funding where applicable	High	NSP	NR
T. Marcellus-6	Protect the Otisco Lake Dam to the 500-year flood level.	1, 2, 3	Flood	The Substation is located in the 100-year floodplain. The town does not have jurisdiction over the facility and	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Yes 💧	None	2 years	Town Floodplain Administrator working with facility operators / owners	<\$100	Provide outreach to the property owner and informing them of potential flood damage and	Municipal budget	Medium	EAP	PI





Table 9.21-12. 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
				cannot mitigate themselves.							possible solutions				
T. Marcellus -7	Protect the OCWA Otisco Lake Pump Station to the 500-year flood level.	1, 2, 3	Flood	The Substation is located in the 100-year floodplain. The town does not have jurisdiction over the facility and cannot mitigate themselves.	The town will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Yes	None	2 years	Town Floodplain Administrator working with facility operators / owners	<\$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
T. Marcellus -8	Drainage study for areas with flood and erosion issues	1, 2, 3	Flood, Severe Storm	The town has four subdivisions (Lathrop Heights, Marcellus Knolls, Aquinnah Heights, and Marcellus Golf Course) which have issues with stormwater/drainage. Marcellus Knolls has already had engineering fees for study and design.	The town will conduct drainage studies for each subdivision and carry out recommended corrections to control stormwater and erosion issues.	No	None	8 years	Town Engineer	\$50,000 for drainage studies, \$250,000 estimated execution of actions (subcontracted)	Stormwater issues corrected in subdivisions	Municipal budget, HMGP	High	LPR	PR





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 9.21-13. 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
T. Marcellus-1 (former TMR-8)	Create municipal stream clearing program	1	1	0	1	1	0	1	1	1	0	1	1	1	1	11	High
T. Marcellus-2	Create program to educate farmers on the importance of proper hedgerow maintenance and Stormwater techniques in steep slope areas.	1	1	1	0	1	1	1	1	1	0	1	1	1	1	12	High
T. Marcellus-3 (former TMR-2)	Conduct and facilitate community and public education and outreach for residents and businesses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. Marcellus-4 (former TMR-5)	Continue to develop, enhance, and implement existing emergency plans.	1	1	1	1	1	1	1	1	1	0	1	0	1	1	12	High
T. Marcellus-5 (former TMR-9)	Continue to support the 2009 NYS Open Space Plan to mitigate the natural hazards identified in this planning process as well as defined in the 2009 NYS Open Space Plan	0	1	1	1	1	0	1	1	1	1	1	1	1	1	12	High
T. Marcellus-6	Protect the Otisco Lake Dam to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
T. Marcellus-7	Protect the OCWA Otisco Lake Pump Station to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium





Table 9.21-13. 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
T. Marcellus-8	Drainage study for areas with flood and erosion issues	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High

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

DRAFT



9.21.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.21.8 Staff and Local Stakeholder Involvement in Annex Development

The Town of Marcellus 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 town departments, including: the Codes Officer and Supervisor. The Supervisor represented the town on the Steering Committee. The Codes Officer 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.

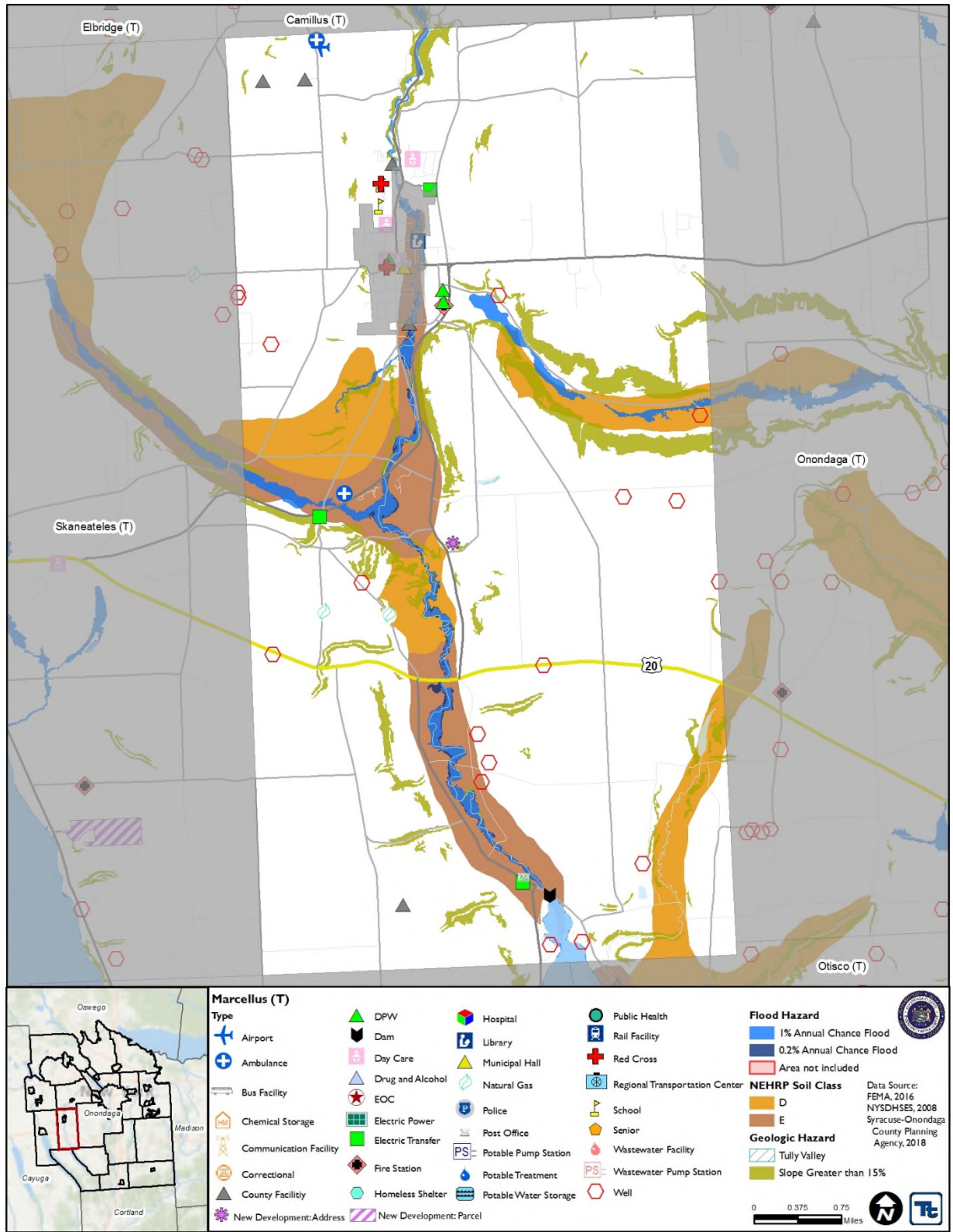
Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.21.9 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Town of Marcellus 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 Town of Marcellus has significant exposure. A map of the Town of Marcellus hazard area extent and location is provided on the following page. This map indicates the location of the regulatory floodplain as well as identified critical facilities within the municipality.



Figure 9.21-1. Town of Marcellus Hazard Area Extent and Location Map





Town of Marcellus Action Worksheet			
Project Name:	Create municipal stream clearing program		
Project Number:	T. Marcellus-1		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, Severe Winter Storm		
Description of the Problem:	<i>Due to steep slopes in the town, the threat for damaging flash flooding in local creeks is high when debris causes jams.</i>		
Action or Project Intended for Implementation			
Description of the Solution:	The town will support/participate in the Stream Team program offered by the Onondaga County SWCD and coordinate for stream clearing activities of trees to prevent log jams. (large trees regularly falling in are the problem)		
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:	To be determined: Protects streams from flooding	Estimated Benefits (losses avoided):	Flood risk in local streams are kept low.
Useful Life:	Ongoing maintenance	Goals Met:	1, 2, 4, 5
Estimated Cost:	\$150,000 for equipment, \$50,000 for other needs.	Mitigation Action Type:	Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Ongoing once established
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	Local budget
Responsible Organization:	Highway Department, County, OCSWCD	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Open Space
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Rely on County	\$0	Frequency of clearing may be too low to address problems
	Ask environmental non-profits for assistance clearing streams	\$0	Large debris likely remain unaddressed. Limited impact on larger potential log/ice jam points
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Create municipal stream clearing program	
Project Number:	T. Marcellus-1	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduction in flooding event potential.
Property Protection	1	Reduction in flooding event potential.
Cost-Effectiveness	0	Though a major flood has not occurred yet, it is very possible. Difficult to determine costs if program not implemented and flood occurs.
Technical	1	
Political	1	
Legal	0	May require permitting.
Fiscal	1	
Environmental	1	Preserve natural waterway functions
Social	1	
Administrative	0	Likely require additional staff
Multi-Hazard	1	Flood, Severe Storm, Severe Winter Storm
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Town of Marcellus Action Worksheet			
Project Name:	Create program to educate farmers on the importance of proper hedgerow maintenance and Stormwater techniques in steep slope areas.		
Project Number:	T. Marcellus-2		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Geologic, Erosion		
Description of the Problem:	<i>Farms in the town exist in many steep slope locations. Removal of hedgerows and incorrect water transfer techniques have resulted in erosion and Stormwater flooding on adjacent downhill roads and properties.</i>		
Action or Project Intended for Implementation			
Description of the Solution:	<p>The town will create and administer an outreach program that will educate farmers on several aspects:</p> <ul style="list-style-type: none"> Hedgerows should be maintained and preserved to slow sheet flow down steep slopes and maintain soil stability Steep slope areas require specific transfer techniques as well as Stormwater detention. Natural watercourses in steep slope areas are easily overwhelmed by oversaturated soils from dewatering of crops fields and heavy precipitation. <p>The town will look to partner with the Soil and Water Conservation District and the NYS DEC to provide input and insight on best management practices for steep slope areas.</p>		
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: Educated farmers resulting in a reduction of runoff	Estimated Benefits (losses avoided):	Reduced Stormwater flooding and erosion in steep slope areas.
Useful Life:	Ongoing program once established	Goals Met:	1, 2, 3, 4, 5
Estimated Cost:	\$ 500.00	Mitigation Action Type:	Natural Systems Protection, Education and Awareness Program
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Ongoing program once established
Estimated Time Required for Project Implementation:	1 years	Potential Funding Sources:	Municipal Budget
Responsible Organization:	Codes Department	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Rely on SWCD for education	\$0	May not be high enough level of outreach necessary to reach all farmers
	Ask non-profits or Education institutions to provide outreach	\$0	Program may not be sustainable year to year.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Create program to educate farmers on the importance of proper hedgerow maintenance and Stormwater techniques in steep slope areas.	
Project Number:	T. Marcellus-2	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduction in erosion and flash flooding
Cost-Effectiveness	1	
Technical	0	Would want input from SWCD and NYS DEC
Political	1	Municipal / farmer relations
Legal	1	The town has the legal jurisdiction to conduct outreach
Fiscal	1	Outreach is able to be fiscally supported
Environmental	1	Preserve natural watercourses
Social	1	
Administrative	0	May need additional part time staff
Multi-Hazard	1	Flood, geologic erosion
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	