



9.12 TOWN OF HENRIETTA

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

9.12.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as primary and alternate points of contact for questions and information on the hazard mitigation plan.

Primary Point of Contact	Alternate Point of Contact
Chuck Marshall, Acting Commissioner of Public Works 475 Calkins Road, Henrietta, NY 14467 585-359-7008 cmarshall@henrietta.org	Chris Martin, Director of Engineering and Planning 475 Calkins Road, Henrietta, NY 14467 585-359-7056 cmartin@henrietta.org

9.12.2 Municipal Profile

The Town of Henrietta is located in the south-central portion of Monroe County, New York. It is bordered by several municipalities, specifically, the Town of Rush to the south, the Town of Mendon to the southeast, the Town of Pittsford to the east, the Town of Brighton to the north, the Town of Chili to the west, and the Town of Wheatland to the southwest. The Town of Henrietta comprises 35.35 square miles in land area and 0.30 square miles in water area.

The Town of Henrietta contains significant natural resources, including a natural corridor along the Genesee River; and woods, wetlands, and streams in north-south-oriented ribbons. The Genesee River is the most notable waterway in the municipality.

According to the 2010 U.S. Census, the Town of Henrietta has a population of 42,581.

Growth/Development Trends

The following table summarizes recent residential/commercial development from 2010 to the present and lists any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next 5 years within the municipality. Figure 9.12-1 illustrates landslide and wildfire hazard areas and Figure 9.12-2 illustrates flood hazard areas.

Table 9.12-1. 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 2010 to present					
15-006 M&T Kiosk	Comm.	1	2599 East Henrietta Road T.A.#176.06-1-22	N/A	Completed
15-007 Rochester Auto Exchange	Comm.	1	4199 West Henrietta Road T.A.#175.07-1-4	N/A	Construction Phase
15-008 Erie Station Business Park – Flex Building II	Ind.	1	30 Becker Road T.A.#188.02-1-67	N/A	Construction Phase
15-009 Sonic Restaurant	Comm.	1	945 Jefferson road T.A.#162.06-1-1	N/A	Construction Phase
15-013 Riverwood Student Housing	Res.	86	4545 East River Road T.A.#174.03-2-1.11	Fed. Wetlands and Flood Zone	Construction Phase





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
E15-003 Wegmans Proposed Cart Corral	Comm.	1	745 Calkins Road T.A.#176.06-1-75.1	N/A	Completed
E15-004 Dorschel Toyota & Frontier Communications	Comm.	3	3441 West Henrietta Road T.A.#161.11-1-2	N/A	Construction Phase
E15-006 Residence Inn Expansion	Comm.	14	1300 Jefferson Road T.A.#162.07-1-5.1	Flood Zone	Construction Phase
E15-007 Mavis Tire	Comm.	1	937 Jefferson Road T.A.#162.09-1-6	N/A	Completed
E15-009 Dorschel Toyota Service Bay Addition	Comm.	3	3399 West Henrietta Road T.A.#161.11-1-6.11	Flood Zone	Construction Phase
E15-011 McAlister's Deli	Comm.	1	3020 Winton Road South T.A.#149.20-2-20.2	N/A	Completed
E15-013 Dorschel Toyota Service Garage Addition	Comm.	3	3399 West Henrietta Road T.A.#161.11-1-6.11	Flood Zone	Construction Phase
E15-014 Mary Cariola Children's Center – Bailey Rd Addition	Comm.	1	700 Bailey Road T.A.#161.18-1-1.2	Flood Zone	Completed
E15-015 John Street – East (Modification) Lot 1	Ind.	1	1200 John Street T.A.#175.01-1-2.11	Federal Wetlands, Flood Zone	Construction Phase
E15-016 Thruway Park Drive Curb Cuts	Ind.	N/A	Thruway Park Drive	N/A	Construction Phase
E15-017 Temporary Storage Unit	Comm.	1	1000 Rush-Henrietta Town Line Road T.A.#202.01-2-47.1	Federal and State Wetlands	Construction Phase
E15-020 51 Goodway Drive South	Res.	3	51 Goodway Drive T.A.#163.05-1-85	N/A	Completed
E15-021 Becker Road Parking Lot Access	Ind.	N/A	Becker Road	N/A	Construction Phase
North Forest Office Providers	Comm.	1	250 Lucius Gordon Drive	N/A	Complete
Known or Anticipated Development in the Next Five (5) Years					
PB-298 Trail View South Subdivision	Res.	32	East Henrietta Road T.A.#202.02-2-29.115	Wetlands	Design Phase
PB-299 Henrietta Town Center Subdivision	Comm.	N/A	Calkins Road T.A.#176.05-1-5.9	N/A	Design Phase
PB-300 Hylan & Scutti Subdiv. – Resub. of Lot 2	Comm.	N/A	Hylan Drive T.A.#161.12-1-7	N/A	Design Phase



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
15-001 T-Mobile Co-Location	Ind.	1	520 Scottsville – West Henrietta Road T.A.#187.04-2-6.2/TWR	Flood Zone	Design Phase
15-002 Middle Road Medical Office	Comm.	1	50 Middle Road T.A.#175.08-1-25	Flood Zone	Design Phase
15-011 Forteq Building Addition	Ind.	1	150 Park Centre Drive T.A.#174.02-1-28	N/A	Design Phase
15-012 Ridge Coin	Comm.	1	945 Jefferson Road T.A.#162.06-1-1	N/A	Design Phase
15-014 Dome Redevelopment at Town Center	Comm.	1	2695 East Henrietta Road T.A.#176.06-1-74.1	Flood Zone	Design Phase
15-015 Town Center Apartments	Res.	11	655 Calkins Road T.A.#176.05-1-59	Flood Zone	Design Phase
15-016 Proposed Restaurant Expansion	Comm.	8	720 Jefferson Road T.A.#162.05-1-3.111	N/A	Design Phase
15-017 Heritage Gardens	Res.	1	950 Commons Way T.A.#162.10-1-72	N/A	Design Phase
E15-001 Rochester Medical Transportation Facility Expansion	Ind.	1	150 Josons Drive T.A.#161.03-1-24.1	Flood Zone	Design Phase
E15-002 Verizon Wireless	Ind.	1	1161 Martin Road T.A.#202.01-2-2.13	N/A	Design Phase
E15-005 Market Square – Proposed Building Expansion.	Comm.	8	700 Jefferson Road T.A.#162.05-1-3.111	N/A	Design Phase
E15-008 Broschak Residence	Res.	1	33 Loreto Ave T.A.#161.19-1-55	N/A	Design Phase
E15-010 One Development	Ind.	1	100 John Street T.A.#161.01-1-15	State Wetlands, Flood Zone	Design Phase
E15-012 Subway & Yogurt Shop	Comm.	1	4843 West Henrietta Road T.A.#175.03-1-6	N/A	Design Phase
E15-018 McCarthy Tents & Events	Comm.	1	3353 Brighton Henrietta Town Line Road T.A.#149.20-2-7	N/A	Design Phase
E15-019 31 Tobin Road	Res.	1	31 Tobin Road T.A.#190.02-1-25.2	N/A	Design Phase
E15-022 Fairfield Inn Henrietta	Comm.	1	4695 West Henrietta Road T.A.#175.10-2-74.2	N/A	Design Phase

* Only location-specific hazard zones or vulnerabilities identified.

9.12.3 Natural Hazard Event History Specific to the Municipality

Monroe County has a history of natural and non-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. For the purpose of this plan update, to the extent possible, all events that have occurred in the County were summarized to indicate the range and impact of





hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in Table 9.12-2. For details of these and additional events, refer to Volume I, Section 5.0, of this plan.

Table 9.12-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
Various	Minor Winter Storms, Rain, Flooding, Cold, and Wind Events	N/A	N/A	The Town has not experienced any significant/noteworthy hazard events in the last 5 years. The majority of hazard events have been minor, natural weather systems and have only involved routine response.

9.12.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Town of Henrietta. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Town of Henrietta. The hazards of concern for the Town are those with a High hazard ranking.

Table 9.12-3. Hazard Risk/Vulnerability Risk Ranking

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
Severe Storm	Expected Losses from Wind Alone: \$0	Frequent	48	High
Utility Failure	Damage Estimate Not Available	Frequent	39	High
Extreme Temperature	Damage Estimate Not Available	Frequent	36	High
Infestation	Damage Estimate Not Available	Frequent	36	High
Severe Winter Storm	1% Damage Loss Estimate: \$76,513,596 5% Damage Loss Estimate: \$382,567,979 10% Damage Loss Estimate: \$765,135,958	Frequent	36	High
Landslide	Exposed: \$2,678,974,995	Frequent	33	High
Earthquake	100-year MRP GBS: \$298,849 500-year MRP GBS: \$8,426,205 2,500-year MRP GBS: \$107,714,979 Annualized: \$135,904	Frequent	30	Medium
Flood	1% annual chance: \$49,249,752	Frequent	27	Medium
Civil Unrest	Damage Estimate Not Available	Frequent	18	Medium
Hazardous Materials	Damage Estimate Not Available	Frequent	18	Medium
Terrorism	Damage Estimate Not Available	Frequent	18	Medium
Wildfire	Exposed Value in the WUI: \$439,624,634	Frequent	18	Medium
Drought	Damage Estimate Not Available	Frequent	12	Low



Notes:

- a. Building damage ratio estimates were based on FEMA 386-2 (August 2001)
- b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
 High = Total hazard priority risk ranking score of 31 and above
 Medium = Total hazard priority risk ranking of 15-30
 Low = Total hazard risk ranking below 15
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract.

National Flood Insurance Program (NFIP) Summary

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

Table 9.12-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in the 1% Flood Boundary (3)
Henrietta (T)	180	26	\$126,713	1	0	89

Source: FEMA Region 2 2015

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of June 30, 2015 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 6/30/15.

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

Note (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file. Number in the floodplain was determined using the 2007 Effective DFIRM 1% annual chance flood boundary.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

Note (5) A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Critical Facilities

The table below presents HAZUS-MH estimates of the damage and loss of use to critical facilities in the community as a result of 1 percent and 0.2 percent annual chance flood events.

Table 9.12-5. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽²⁾
John Street Pump Station	Wastewater Pump	X	X	-	-	-
Riverton Pump Station	Wastewater Pump		X	-	-	-

Source: Monroe County; HAZUS-MH 2.2; FEMA 2015

Note (1): HAZUS-MH 2.2 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.2 User Manual).

Note (2): In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type. Further, HAZUS-MH may estimate potential damage to a facility that is outside the DFIRM because the model generated a depth grid beyond the DFIRM boundaries.

NA Not available

X Facility located within the DFIRM boundary





- Not calculated by HAZUS-MH 2.2

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- The Town has noted an increase in significant rainfall events, in HazMat (in transit) events, in snowfall events, and in utility failures (from aging infrastructure). The Town has increased crude oil training to help mitigate against HazMat events.

9.12.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capabilities
- Administrative and technical capabilities
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capabilities

The table below summarizes the regulatory tools that are available to the Town of Henrietta.

Table 9.12-6. 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				
Master Plan	Yes; Update 03/05/2015	Local	Town	2003 Comprehensive Land Use Plan; Strategic Update to the Comprehensive Plan, 2011; Strategic Update to the Comprehensive Plan Community Survey, 2010
Capital Improvements Plan	No			
Floodplain Management / Basin Plan	Yes	Local	Building/Engineering	Town Code Ch. 125 – Flood Damage Prevention – 04/01/2015
Stormwater Management Plan	Yes	Local/County	Engineering/ Monroe County	Stormwater Management Program Plan – 08/20/2009
Open Space Plan	Yes	Local	Town	2003 Comprehensive Land Use Plan - 03/05/2015
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes	Local	Town	Draft in progress





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.)
Emergency Response Plan	Yes	Local	Town	Draft in progress
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	N/A			
Regulatory Capability				
Building Code	Yes	State	Building	Building Code of NY; Building and Development Chapter 48
Zoning Ordinance	Yes	Local	ZBA	Zoning Chapter 500 Town Code – 04/01/2015
Subdivision Ordinance	Yes	Local	PB	Town Code Ch. 245 – Subdivision of Land – 04/01/2015
NFIP Flood Damage Prevention Ordinance	Yes	Local/State	Building	Town Code Ch. 125 – Flood Damage Prevention – 04/01/2015
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Engineering	Town Code Ch. 295 – Zoning – 04/01/2015
Stormwater Management Ordinance	Yes	Local	Engineering	Town Code Ch. 236 – Stormwater Management – 04/01/2015; Drainage Chapter 84
Municipal Separate Storm Sewer System (MS4)	Yes	Local/County	Engineering	Town Code Ch. 236 – Stormwater Management – 04/01/2015
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	No			
Other (Special Purpose Ordinances such as sensitive areas, steep slope, etc.)	No			

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Henrietta.

Table 9.12-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		





Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Planning Board	Yes	Engineering Department
Mitigation Planning Committee	No	
Environmental Board/Commission	No	
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	Yes	Building and Engineering Departments
Mutual Aid Agreements	Yes	Finance Department
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Engineering Department
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Building and Engineering Departments
Planners or engineers with an understanding of natural hazards	Yes	Safety Officer and Engineering Department
NFIP Floodplain Administrator	Yes	Building Department
Surveyor(s)	Yes	Engineering Department
Personnel skilled or trained in GIS and/or HAZUS-MH applications	Yes	Engineering Department
Scientist familiar with natural hazards	No	
Emergency manager	No	
Grant Writer(s)	Yes	Finance Department, Safety Officer, and Engineering Department
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	Yes	Building Department

Fiscal Capability

The table below summarizes financial resources available to the Town of Henrietta.

Table 9.12-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes – Engineering Department/Town Board
Capital Improvements Project Funding	Yes – Finance Department/Town Board
Authority to levy taxes for specific purposes	Yes – Town Board
User fees for water, sewer, gas or electric service	Yes – Sanitary Sewer Districts
Impact fees for homebuyers or developers of new development/homes	Yes – Town Board
Stormwater utility fee	Yes – Drainage Districts
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes – Finance Department/Town Board
Open Space Acquisition Funding Programs	No
Other	N/A



Community Classifications

Table 9.12-9 summarizes classifications for community program available to the Town of Henrietta.



Table 9.12-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	NP
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	-	-
Storm Ready	Yes	StormReady County	N/A
Firewise	No	NP	NP
Disaster/Safety Programs in/for Schools	Yes	-	-
Organizations with Mitigation Focus (advocacy group, non-government)	No	N/A	N/A
Public Education Program/Outreach (through website, social media)	Yes	-	-
Public-Private Partnerships	No	N/A	N/A

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 classification 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
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <http://www.stormready.noaa.gov/become.shtml>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Town of Henrietta’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.12-10. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capabilities			X





Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Administrative and Technical Capabilities		X	
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

NFIP Floodplain Administrator (FPA)

Director of Building and Fire Prevention

Flood Vulnerability Summary

The Town of Henrietta does not maintain an inventory of properties that have been flood damaged. To the Town’s knowledge, no structures were damaged during any recent significant storm events, including Hurricanes Floyd, Irene, or Sandy. The Town has not conducted any substantial damage assessments as a result of these storms, and it is not aware of any property owners interested in mitigation activities.

Resources

The Floodplain Administrator is the primary person assuming the responsibilities of floodplain administration; however, he is supported by the Engineering Department, as needed. Terry Ekwel, Director of Building and Fire Prevention, provides NFIP administration services and functions, including permit review, inspections, record-keeping, and GIS. There is currently no education or outreach being offered to the community specifically regarding flood hazards/risk or flood risk reduction through NFIP insurance or mitigation.

The Floodplain Administrator does not report any barriers to running an effective floodplain management program in his community. Additionally, he feels adequately supported and trained to fulfill his responsibilities as the municipal floodplain manager, although he believes additional training would be helpful. The Floodplain Administrator expressed interest in attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Compliance History

As of June 30, 2015, 180 policies are in force, 89 of which are within the 100-yr flood boundary. There is one repetitive loss and no severe repetitive loss properties in the Town. Since 1978, 26 claims have been paid within the Town of Henrietta. According to the NFIP Policy Statistics report available at the time of this plan, the policies in the Town insured \$1.717 million of property with total annual insurance premiums of \$6,197.

The Floodplain Administrator is unaware of any outstanding NFIP compliance issues in the community, and does not know when the most recent FEMA Community Assistance Visit (CAV) was completed. The New York State Department of Environmental Conservation performed an audit on March 15, 2013.





Regulatory

The Town's Flood Damage Prevention Ordinance (FDPO) was last reviewed and updated in April 2015 and is found in Chapter 125 of the local code. Floodplain management regulations and ordinances meet the FEMA and New York State minimum requirements, and do not exceed these requirements.

There are other local ordinances, plans, and programs that support floodplain management and meet NFIP requirements in the Town of Henrietta, including the planning and zoning board reviews of development applications to consider efforts to reduce flood risk.

Community Rating System

The Town of Henrietta does not participate in the Community Rating System (CRS) program; however, it is interested in considering this program to lower premiums for residents.

Other Capabilities Identified

Previous actions taken that are now ongoing programs and capabilities, are described below. Refer to Table 9.12-11 presented later in this annex.

- The Safety Officer ensures proper disposal of hazardous waste.
- The Building and Fire Prevention Department enforces government permitting processes, as well as provides comprehensive inspection services. This department also enforces the building code as required for new and existing infrastructure.
- The Engineer and the Building and Fire District Director administer the Floodplain Management Program.
- The Department of Public Works (DPW) maintains public infrastructure.
- The Town of Henrietta promotes the purchase of appropriate hazard insurance policies, and the Town Board promotes property acquisition, as needed. The Town also complies with all applicable state and federal regulations.
- The Planning Board regularly reviews local laws.
- The Building and Fire Prevention Department, DPW, and Engineering Department disaster-proof public facilities. Facilities are considered for update and repair every budget cycle. Critical systems are shored up, as needed. Redundant power and generator needs are considered when facilities are renovated or receiving routine upgrades, not as separate projects. Priority is based on need and funding.
- The Fire District encourages residential use of smoke detectors and routinely installs detectors, where needed.
- Applicable Fire District members participate in special operations training with the County Team, as opportunities arise.
- The Town keeps floodplain maps and dam inundation maps on file in local offices. Participation in the CRS is evaluated on a regular basis.
- The Information Technology (IT) department expands information on websites and keeps notices up to date.
- The DPW has developed plans for debris management and updates these as needed.
- The Administration Department annually reviews (at budget time) whether critical and public facilities need to be hardened. This is conducted as funding allows.
- The Highway Department provides notification of closed roads as a normal part of business.
- The Town actively participates in County stormwater management initiatives. Additionally, the Town inspects outfalls and streams on a regular basis for resiliency needs.



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.

Planning

Land Use Planning: The Town of Henrietta has a Planning Board and Zoning Board of Appeals which review all applications for development and consider natural hazard risk areas in their review. Many development activities require additional levels of environmental review, specifically NYS State Environmental Quality Review Act (SEQR) and federal National Environmental Policy Act (NEPA) requirements. The Town also has several other boards, including a Board of Assessment and Conservation Board. The Town's Building and Fire Prevention Department is responsible for compliance with all national, state, and local codes, rules, and regulations. The Town is also a MS4-regulated community and maintains a stormwater management program plan.

Strategic Update to the Comprehensive Plan, 2011: The Town updated its 2003 Comprehensive Land Use Plan in 2011 by developing a strategic update. This update recognizes that the Town still maintains similar goals, policies, and recommendations as described in the 2004 plan; however, it seeks to set priorities and outline implementation actions for the Town based on these recommendations for the next 5 to 10 years. Although the Town identifies land use, it does include the identification of natural hazard risk areas in this update. It does, however, include some recommended actions which would also benefit hazard mitigation for the community:

1. Continue communications improvements – Expand efforts to improve communication via new media while continuing to provide more traditional media.
2. Protect agriculture and open space in the Town, and develop a green infrastructure plan.
3. Implement better design guidelines/standards, including innovative methods for stormwater management.

Strategic Update to the Comprehensive Plan Community Survey, 2010: As part of the comprehensive plan update described above, the Town surveyed residents to determine current demographic information and areas of interest/concern. The survey responses provide information which may also be beneficial in determining residents' priorities for hazard mitigation. For instance, 83 percent of respondents generally support efforts to protect key farmland and open space areas, and 27 percent might be willing to pay an increase in local property taxes to help fund a land conservation program (32 percent were not sure).

Regulatory and Enforcement

Building and Development Chapter 48: The building codes are strictly enforced by the Fire Marshal/Building Inspector to ensure that new and renovated buildings are prepared, as much as possible, for hazard-related incidents. The Town complies with New York State Uniform Fire Prevention and Building Code (the Uniform Code).

Drainage Chapter 84: The Town of Henrietta implements measures appropriate to remedy and prevent flooding of sanitary and storm drains; and to protect residents by ensuring adequate drainage, specifically near residential cellars.



Fire Prevention Chapter 119: Similar to the Town’s building codes, the Fire Marshal/Building Inspector enforces all designs, regulations, and ordinances, including the Uniform Code, to prevent or minimize the risk of house or structural fires.

Flood Damage Prevention Chapter 125: This chapter promotes the public health, safety, and general welfare of residents and seeks to minimize public and private losses due to flood conditions. The chapter regulates development to promote flood resistant structures and controls the alteration of floodplains to prevent increased vulnerability.

Stormwater Management Chapter 236: The Town’s stormwater management chapter seeks to mediate the adverse impacts of stormwater runoff caused by existing drainage systems. It also serves to control the degradation of water quality in the Town.

Subdivision of Land Chapter 245: The Town’s Planning Board is tasked with site plan/subdivision review. The Planning Board pays special attention to ensure that developments mitigate the issues associated natural hazards. Subdivision shall preserve natural and historic features, as well, where possible.

Zoning Chapter 295: The Town of Henrietta’s zoning code includes districts and standards. Although these do not necessarily directly pertain to the mitigation of hazards, they support consistent and safe land use planning.

Fiscal

Operating Budget: The Town’s operating budget contains minimal provisions for expected repairs like snow removal and infrastructure repair after a storm or natural disaster. The Town also maintains special district funds for the consolidated sanitary sewer district, the consolidated drainage district, special greenbelts, sanitary sewer, and others.

Capital Budget: The Town’s 2015 capital budget includes allocations for mitigation-related projects including the facility improvements (7 percent), park improvements (7 percent), road program (30 percent), infrastructure (39 percent), and vehicles and field equipment (16 percent).

Education and Outreach

Town of Henrietta staff attend trainings and classes sponsored by Monroe County Department of Planning and Development, Monroe County Office of Emergency Management, or by state and federal agencies, as able and in order to meet all professional requirements. Town emergency responders also have the option to attend courses at the Monroe County Public Safety Training Facility.

The Town has the capacity to share hazard education and information with its residents. It maintains a well-developed and easily accessible website, which includes useful residential information, such as listed below.

- Road Work Updates (<http://henrietta.org/index.php/community/road-work-updates>)
- Henrietta Happenings Quarterly Newsletter Archives (<http://henrietta.org/index.php/doccenter/henrietta-happenings-newsletter>)
 - Some issues have hazard awareness information articles, but this depends on the issue.
- Public Safety Links (<http://henrietta.org/index.php/community/links-of-interest/public-safety>)
- Seasonal Flu Information (<http://henrietta.org/index.php/community/seasonal-flu>)

The Town also has a Facebook page that it can use to disseminate information and warnings to residents, in the event of an emergency (<https://www.facebook.com/TownOfHenrietta/timeline>). In addition, residents have the



ability to sign up for reverse 911 cell phone notifications of emergency situations through the Monroe County Emergency Communications Department.

9.12.6 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

Table 9-12-11 indicates progress on the community's mitigation strategy identified in the 2010 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 ongoing 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 9.12-11. Past Mitigation Initiative Status

2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
ES-3: Establish an active Recruitment and Retention (of providers) Program.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
ES-4: Stockpile emergency supplies.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
ES-5: Solicit "Mutual Aid" agreements.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
ES-6: Engage emergency service jurisdictions in local municipal government processes.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
NRP-1: Ensure proper disposal of Hazardous Waste.	Safety Officer	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
NRP-2: Enforce government permit processes. This may pertain to existing and/or new infrastructure.	Building and Fire Prevention	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
NRP-3: Provide comprehensive inspection services. This may pertain to existing and/or new infrastructure.	Building and Fire Prevention	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
NRP-4: Administer a Floodplain Management Program. This may pertain to existing and/or new infrastructure.	Town Engineer	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
NRP-5: Maintain "Urban Forests."	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
PEA-3: Review Utility Service & restoration plans.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
PEA-4: Identify and utilize a "Speakers Bureau."	N/A	No Progress	N/A	Discontinue	Not applicable to Town.





2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
PP-1: Identify “special hazard” areas.	F.D., Town	Some Progress	Town Complex – Hazards Defined Outside – No Identification The majority of hazard areas have been identified, and the list is maintained regularly.	Discontinue	Not applicable to Town.
PP-2: Maintain public infrastructure. This may pertain to existing and/or new infrastructure.	D.P.W.	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
PP-3: Solicit inter-municipal and interagency cooperation.	Multiple	In Progress	Some in effect	Discontinue	Describe in 2017 HMP as ongoing operational capability
PP-4: Promote purchase of appropriate hazard insurance policies. This may pertain to existing and/or new infrastructure.	Department Supervisor	Continuous	Normal Part of Business; Town has specific staff member in charge of insurance management	Discontinue; Complete	Describe in 2017 HMP as ongoing operational capability
PP-5: Property acquisition	Town Board	Continuous	Town identifies specific properties as needed and as funding allows	Discontinue	Describe in 2017 HMP as ongoing operational capability
PR-1: Enforce Building Code as required for existing and new infrastructure.	Building and Fire	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
PR-2: Comply with applicable federal and state regulations.	All Departments	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
PR-5: Regular review of Local Laws	Planning Board	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
SP-1: Disaster “proof” public facilities. This may pertain to existing and/or new infrastructure.	Building and Fire, DPW, Engineering	Continuous	Facilities are considered for update and repair every budget cycle	Discontinue	Describe in 2017 HMP as ongoing operational capability
SP-2: Secure and provide redundant critical systems and facilities. This may pertain to existing and/or new infrastructure.	IT, DPW, Engineering	In Progress	Systems are shored up as needed	Discontinue	Describe in 2017 HMP as ongoing operational capability
SP-3: “Target Harden” facilities. This may pertain to existing and/or new infrastructure.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.





2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
SP-4: Expand fiber telecommunications networks.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
EPI-PR-2: Local Project. Provide HIV screening and public education (Democrat & Chronicle, 7-21-03).	County Health	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
Fire-ES-1: Local Project. The Henrietta Fire District is developing a Special Operations Unit for Confined Space Rescue, Low and High-Angle Rescue, Water Rescue, and Trench Rescue.	Fire Chief, HFD	Complete	Special Operations equipment has been purchased, and several Fire District members serve on the Monroe County Special Operations Team.	Discontinue; Project Completed	Project completed
Fire-PEA-1: Local Project. Henrietta Fire District develops and schedules an annual campaign for Fire Prevention using its mobile Fire Safety Trailer and a portable interactive kiosk at schools, community functions, and public facilities.	Fire Chief, HFD	Complete	Normal Part of Business, Events are held annually and maintain a Safety and Fire Prevention staff member	Discontinue; Project Completed	Describe in 2017 HMP as ongoing operational capability
Fire-PP-1: Encourage residential use of smoke detectors through public education, and “give away” programs. This may pertain to existing and/or new infrastructure.	Fire Chief, HFD	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
Fire-SP-1: Local Project. Plan, design and develop enhanced, local facilities for on-site specialized emergency training.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
FI-ES-1: Provide Special Operations and Tactical Rescue training including water rescue training	Fire Chief	In Progress	Training has begun; County has Special Operations Teams in Operation, and several HFD members participate	Discontinue	Describe in 2017 HMP as ongoing operational capability
FI-PEA-1: Provide information about the Erie Canal and its spillway locations	N/A	No Progress	N/A	Discontinue	Not applicable to Town.



2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
FI-PEA-3: Riga Project. Provide maps of flood plain area to residents who could be affected by a dam failure. This may pertain to existing and/or new infrastructure.	Engineering	Continuous	Maps are on file in Town Offices	Discontinue	Describe in 2017 HMP as ongoing operational capability
FI-PP-1: Encourage affected property owners to purchase Flood Insurance. This may pertain to existing and/or new infrastructure.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
FI-PP-2: Participate in the federal Community Rating System. This may pertain to existing and/or new infrastructure.	Engineering	Continuous	Town has met with other municipalities to discuss benefit of participation. CRS is not currently a targeted priority due to timing and other limitations; however, the Town will continue to evaluate this and may pursue in the future.	Include in 2017 HMP	Adjust wording to reflect current status.
FI-PP-5: Local Projects with the U.S. Army Corps of Engineers, "Risk Management Program." Levy inspection, safety analysis and maintenance requirements (SEMO Region V meeting, 7.29.08).	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
FI-PR-1: Implement an annual, "Waterway/Drainage Maintenance" Program	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
FI-PR-5: Local Project. Implement an annual de-silting program in the Town of Henrietta, to increase the storage capacity for storm water detention and retention ponds. This may pertain to existing and/or new infrastructure.	Town Engineering Department and Drainage Department	In Progress	Small Percentage of Work Complete. The Town inspects ponds and outfalls every 3 years as part of its stormwater program. It has cleaned out at least one area in the past several years..	Discontinue	Describe in 2017 HMP as ongoing operational capability. The Town will pursue red flags as they are identified and will continue to perform ongoing maintenance.
FI-SP-1: Local Project. Implement mitigation measures for Irondequoit Creek, as identified by the U.S. Army Corps of Engineer's 2003 proposal, and as agreed by local parties. (reference – Democrat & Chronicle, 3-2-03). This may pertain to existing and/or new infrastructure.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.



2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
FI-SP-2: Local Project. Implement municipal mitigation measures identified by USGS modeling, proposed by the Storm Water Coalition and agreed by local parties. This may pertain to existing and/or new infrastructure.	Engineering	Continuous	The Town is an active participant in the County's stormwater management program. It participates as initiative opportunities arise.	Discontinue	Describe in 2017 HMP as ongoing operational capability. The Town evaluates projects and actions individually, as they arise.
FI-SP-7: Local Project. Town of Henrietta replace road culverts to improve flow and reduce flooding potential on Parkmeadow Drive, Tomahawk Trail and Colleen Way. This may pertain to existing and/or new infrastructure.	Town Engineer	Complete	Completed	Discontinue	Project Complete
Ice-ES-1: Develop a strategy to reduce the time it takes to clear streets (Rights-of-Way) of debris	Highway	In Progress	Research is ongoing and adjustment is made, as possible	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-ES-2: Regularly review restoration priorities	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
Ice-ES-3: Enhance utility "Town Liaison" Program	Supervisor	In Progress	Liaison Secured for RG&E, no other utilities	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-PEA-2: Develop alternate communications plan	Highway F.D.	In Progress	The Town's immediate need is to replace its two-way radio system. It has grant money promised for this project but has not yet implemented in it. The Town will also participate in the County update to the radio system; however, that will likely still be a few years out.	Include in 2017 HMP	Reword action to show current status.
Ice-PEA-3: Provide automated utility restoration schedule to the public	RG&E	Continuous	RG&E has outage information on their site	Discontinue	Action is maintained by RG&E
Ice-PEA-4: Provide more public outreach during an emergency	Supervisor	Continuous	This action is primarily coordinated through the County. If done at a Town level, information will be posted on the Town website, or the Town will contact appropriate media (radio and TV) channels. The Town will go door-to-door to notify residents as well. The Town also complies with the Stormwater Response Plan notification procedures for sewage overflow.	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-PEA-5: Expand utility Customer Service capacity	RG&E	Continuous	RG&E expands utility services, as needed.	Discontinue	Maintained by RG&E





2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Ice-PEA-6: Expand information available on websites	IT Department	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-PP-1: Encourage installation of backup power supply. This may pertain to existing and/or new infrastructure.	Safety Officer	Complete	Generator available for pump stations and permanent standby generator installed at DPW.	Discontinue	Project complete
Ice-PR-1: Implement an "Annual, Tree/Stream Maintenance Program"	Engineering	Continuous	The Town's stream management program is tied into its Stormwater Management Plan (SWMP). The Town has an informal process in place where it regularly evaluates/targets a couple streams to determine maintenance needs (which are implemented as needed and as funding allows). Program does not always occur annually, but it is a recurring action by Town staff. Additionally the Town conducted a tree audit recently to determine insect infestation concerns. This is not an annual program, however.	Discontinue	Describe in 2017 HMP as ongoing operational capability (Stream Maintenance) Tree Maintenance Program is evaluated as needed.
Ice-PR-2: Relocate vulnerable utilities. This may pertain to existing and/or new infrastructure.	RG&E	N/A	This action is not maintained by the Town.	Discontinue	Action is maintained by RG&E
Ice-PR-3: Develop DPW/DOT Plans for debris clearance, removal, and disposal	D.P.W.	Continuous	Normal Part of Business; Update as needed	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-PR-4: Lobby state and federal officials to require permanent installation of emergency generators on-site at health care facilities and elderly housing facilities. This may pertain to existing and/or new infrastructure.	Supervisor	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
Ice-SP-1: Install permanent backup power supply at public facilities. This may pertain to existing and/or new infrastructure.	Administration	Continuous	The Town evaluates this need when facilities are upgraded or replaced. Town Hall will likely be the next facility to be rebuilt; however, this is not an immediate targeted project for completion.	Discontinue	Describe in 2017 HMP as ongoing operational capability
Land-PEA-1: Local Project. Promote understanding and use of (telephone number) 811, "Call Before You Dig."	Dig Safely	Complete	Promotion needs have been successfully been implemented by Dig Safely. Town supports program where needed; however, it is primarily run through Dig Safely.	Discontinue; Completed	Project Completed





2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Land-PR-1: Local Project. Enact Local Laws: to restrict development on steep slopes; to require property owners and/or mine operators to rehabilitate open mines at closing. This may pertain to existing and/or new infrastructure.	Engineering	Continuous	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
SC-PR-1: Local Project. Enact Local Laws that require property owners to demolish and remove unsafe structures from their property(ies). This may pertain to existing and/or new infrastructure.	Fire Marshal	Complete	Property Maintenance Codes, Address Failing Properties	Discontinue	Describe in 2017 HMP as ongoing operational capability
Terr-PP-1: Implement a strategy to "target harden" critical and public facilities. This may pertain to existing and/or new infrastructure.	Administration, DPW, Fire Marshall	Continuous	Annual review at budget time and updates as money allows	Discontinue	Describe in 2017 HMP as ongoing operational capability
Terr-PR-1: Provide intelligence to local authorities about legal surveillance and threat assessment activities.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
Terr-PR-2: Review emergency plans for public facilities to ensure that appropriate measures are considered and referenced	Safety Officer	In Progress	Draft plan awaiting approval	Discontinue	Describe in 2017 HMP as ongoing operational capability
Terr-PR-3: Schools Project. Comply with Project Save regulations for plan review and revision cycles.	N/A	No Progress	N/A	Discontinue	Not applicable to Town.
Trans-ES-1: Local Project. The Town of Henrietta's Highway "Snow & Ice Control" Program is testing treated road salt for benefits associated with its application to enhance the capacity of normal road salt.	Town, HS	Complete	Testing was inconclusive of any benefit.	Discontinue	Project completed
Trans-PEA-1: Local Project. Provide traffic reports through the local broadcasters	Highway	Continuous	Notification of closed roads Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability





2011 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g. FEMA HMGP grant, local budget)?	Next Step (Include in 2017 HMP? or Discontinue)	Describe Next Step 1. If including action in the 2017 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Trans-PEA-2: Local Project. Provide construction information and project status on sites that impact traffic	Commissioner of Public Works	Ongoing	Normal Part of Business	Discontinue	Describe in 2017 HMP as ongoing operational capability
Util-ES-1: Local Projects. Provide power back-up supply for municipal fueling stations. This may pertain to existing and/or new infrastructure.	Commissioner of Public Works	Complete	Town utilizes Rush-Henrietta Central School (RHCS) fueling site with backup generator for power.	Discontinue; Project complete	Describe in 2017 HMP as ongoing operational capability
Util-PP-1: Local Utilities Project. Preserve capacity to generate local power and enhance the ability to segregate local supply from the national power grid during major failures, e.g. August 14, 2003. This may pertain to existing and/or new infrastructure.	Commissioner of Public Works	Complete	New generator and transfer switch installed at the DPW building	Discontinue	Project completed
WSC-PR-1: Provide redundant back-up power supply for public supply treatment facilities and system pump stations. This may pertain to existing and/or new infrastructure.	Sewer Foreman	Complete	Several generators on site to provide backup power to pump stations	Discontinue	Project completed



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Town of Henrietta has identified the following mitigation project that was also completed, but was not identified in the previous mitigation strategy in the 2010 Plan:

- The Town completed a culvert inventory in 2014/2015 to assess the condition of its culverts (for future repairs and other needs).

Proposed Hazard Mitigation Initiatives for the Plan Update

FEMA Region II led a meeting for all Monroe County municipalities in November 2015 to discuss the purpose, goals, and long-term benefits of identifying mitigation actions to include in the updated HMP. FEMA provided handouts on creating a functionally diverse jurisdictional planning team, guidance for identifying integration actions, and guidelines for completing an action worksheet for jurisdictions to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards.

Additionally, Monroe County hosted two Annex Workshops in December 2015 to assist municipalities in completing their jurisdictional annexes, including identifying mitigation projects and developing action worksheets. All jurisdictions were provided with a set of sample mitigation actions that satisfied County goals of addressing all hazards and representing all six CRS categories, along with a refresher instruction sheet on how to complete an action worksheet, and an example of a completed action worksheet.

In January, Monroe County jurisdictions were provided with the results of the municipal risk assessment to further assist them in the development of their mitigation strategy. Throughout the planning process, jurisdictions had access to mitigation planners who were available to assist with the development of the jurisdictional annexes, including the mitigation strategy and action worksheets, as necessary.

Table 9.12-12 summarizes the comprehensive range of specific mitigation initiatives that the Town of Henrietta 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. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in Table 9.12-12 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 9.12-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.12-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
TH-1	Upgrade Castle Road culvert to improve flow and reduce flooding potential.	Existing	Flood, Utility Failure	2, 3	Town Engineer and DPW	Medium	Low	Local budget	Short-Term	High	SIP	PP, SP
TH-2	Replace Town's two-way radio system. This will involve securing promised grant funds as well as purchasing and distributing the radios.	N/A	All	All	Town and selected contractor	High	High	State grant funding	Short-Term	High	SIP, EAP	ES
TH-3	Conduct education and outreach to residents and business owners to inform them if their properties are in known hazard areas, and actions they can take to protect their properties.	Existing	Earthquake, Extreme Temperatures, Flood, Infestation, Landslide, Severe Storms, Severe Winter Storms, Wildfire, HazMat, Utility Failure	1, 3, 4	Town Clerk	High	Low	Operating budget	OG	High	EAP	PI
TH-4	During extreme storm events, the sanitary trunk sewer serving the east side of Henrietta has been known to surcharge, causing sewage to enter the storm sewer system and causing basements to flood. The Town is considering an overflow sanitary sewer installed to transfer sewage from one trunk sewer to another.	Existing	Utility Failure	2, 3	Town Engineer, Passero Associates	High	High	Private developer	Short (End of 2016)	High	SIP	PP, PR
TH-5	Turn the existing drainage way along a creek in the Mapledale Subdivision between Beckwith Road and Campus Drive into a stormwater management facility to reduce downstream flooding. This will also enhance the area by providing trails and benches around the pond.	Existing	Flood	2	Town Engineer, Town DPW, Outside consultants (design work)	High	High	Local budget	Short	Medium	NRP	NS
TH-6	Initiate a manhole repair program to inspect manholes and repair/rehabilitate where needed.	Existing	Utility Failure	2	Town Engineer, Contractor (Repairs)	Medium	Medium	Local budget	Short-Term then ongoing	Medium	SIP	PP, PR





Table 9.12-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CFS Category
TH-7	Initiate a culvert maintenance program to inspect culverts and repair/rehabilitate where needed.	Existing	Flood, Utility Failure	2	Town Engineer, Town DPW, Contractor (Larger repairs)	Medium	Medium	Local budget	Short-Term then ongoing	High	SIP	PP, PR
TH-8	Add means to connect alternative fuel source to generators (#2 fuel oil) for Rochester Institute of Technology (RIT).	Existing and New	Utility Failure, Flood	3	RIT Facilities Management Services, Contracted Service Provider	High	Medium	Grant funding with local cost share (for existing facilities), local funding (for new facilities)	Long-Term	High	SIP	PP
TH-9	Lower piping at RIT to 6 feet below ground to make it lower than the 100-year freezing depth guidelines.	Existing and New	Extreme Temperature	3	RIT Facilities Management Services, Contracted Service Provider	Medium	Medium	Grant funding with local cost share (for existing facilities), local funding (for new facilities)	Short-Term	Medium	SIP	PP
TH-10	Install electric trace heating, with associated insulation, in RIT buildings for water and sanitary pipes of concern.	Existing and New	Extreme Temperature	3	RIT Facilities Management Services, Contracted Service Provider	Medium	Medium	Grant funding with local cost share (for existing facilities), local funding (for new facilities)	Short-Term	Medium	SIP	PP
TH-11	Dredge the northern end of Red Creek where it drains into the Erie Canal to prevent flooding of RIT campus.	N/A	Flood, Dam Failure	1, 3, 5	RIT Facilities Management Services, Environmental Health Services	High	High	Grant funding with local cost share, local funding	Long-Term	High	NSP	NR
TH-12	Install snow/ice melt system on RIT building roofs (electrical, hot water, etc.) that can be engaged when snows/icing are predicted to produce loads of concern.	Existing and New	Severe Winter Storm	3	RIT Facilities Management Services, Contracted Service Provider, Town of Henrietta	High	High	Grant funding with local cost share (for existing facilities), local funding (for new facilities)	Long-term	High	SIP	PP





Table 9.12-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
TH-13	Continue to evaluate the benefits of CRS and pursue an application to join, if appropriate.	N/A	Flood, Severe Storm	All	Town of Henrietta	High	Medium	County Budget, Municipal Budget	Ongoing	Medium	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
NYS DHSES	New York State Division of Homeland Security and Emergency Services
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
RFC	Repetitive Flood Claims Grant Program (discontinued)
SRL	Severe Repetitive Loss Grant Program (discontinued)

Timeline:

Short-Term	1 to 5 years
Long-Term	5 years or greater
OG	On-going program
DOF	Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reappropriation of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High	Project will have an immediate impact on the reduction of risk exposure to life and property.





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 structures built 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



Table 9.12-13. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action / Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TH-1	Upgrade Castle Road culvert to improve flow and reduce flooding potential.	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
TH-2	Replace Town's two-way radio system. This will involve securing promised grant funds as well as purchasing and distributing the radios.	1	0	1	0	0	1	1	0	0	1	1	1	1	1	10	High
TH-3	Conduct education and outreach to residents and business owners to inform them if their properties are in known hazard areas, and actions they can take to protect their properties.	1	1	1	1	1	1	1	0	1	-1	1	1	1	1	11	High
TH-4	During extreme storm events, the sanitary trunk sewer serving the east side of Henrietta has been known to surcharge, causing sewage to enter the storm sewer system and causing basements to flood. The Town is considering an overflow sanitary sewer installed to transfer sewage from one trunk sewer to another.	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
TH-5	Turn the existing drainage way along a creek in the Mapledale Subdivision between Beckwith Road and Campus Drive into a stormwater management facility to reduce downstream flooding. This will also enhance the area by providing trails and benches around the pond.	0	1	0	1	0	1	0	1	0	1	0	1	1	0	7	Medium
TH-6	Initiate a manhole repair program to inspect manholes and repair/rehabilitate where needed.	0	1	1	1	1	1	1	1	0	0	0	1	1	0	9	Medium
TH-7	Initiate a culvert maintenance program to inspect culverts and repair/rehabilitate where needed.	1	1	1	1	1	1	1	1	0	0	1	1	1	0	11	High
TH-8	Add means to connect alternative fuel source to generators (#2 fuel	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High





Table 9.12-13. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action / Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	oil) for Rochester Institute of Technology (RIT).																
TH-9	Lower piping at RIT to 6 feet below ground to make it lower than the 100-year freezing depth guidelines.	1	1	1	1	0	0	1	1	0	0	0	1	1	0	8	Medium
TH-10	Install electric trace heating, with associated insulation, in RIT buildings for water and sanitary pipes of concern.	1	1	1	1	1	0	1	0	1	0	0	1	1	1	10	Medium
TH-11	Dredge the northern end of Red Creek where it drains into the Erie Canal to prevent flooding of RIT campus.	1	1	1	1	0	1	1	1	1	1	1	1	1	0	12	High
TH-12	Install snow/ice melt system on RIT building roofs (electrical, hot water, etc.) that can be engaged when snows/icing are predicted to produce loads of concern.	1	1	1	1	1	0	1	-1	1	-1	1	1	1	1	9	High
TH-13	Continue to evaluate the benefits of CRS and pursue an application to join, if appropriate.	1	1	1	0	1	1	0	1	1	-1	1	0	0	0	7	Medium

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.12.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.12.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Town of Henrietta 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 (i.e., wildfire, landslide, and flooding) that can be clearly identified using mapping techniques and technologies, and for which the Town of Henrietta has significant exposure. These maps are illustrated in the hazard profiles within Volume I, Section 5.4, of this Plan.

9.12.9 Additional Comments

None at this time.



Figure 9.12-1. Town of Henrietta Wildfire and Landslide Hazard Area Extent and Location Map

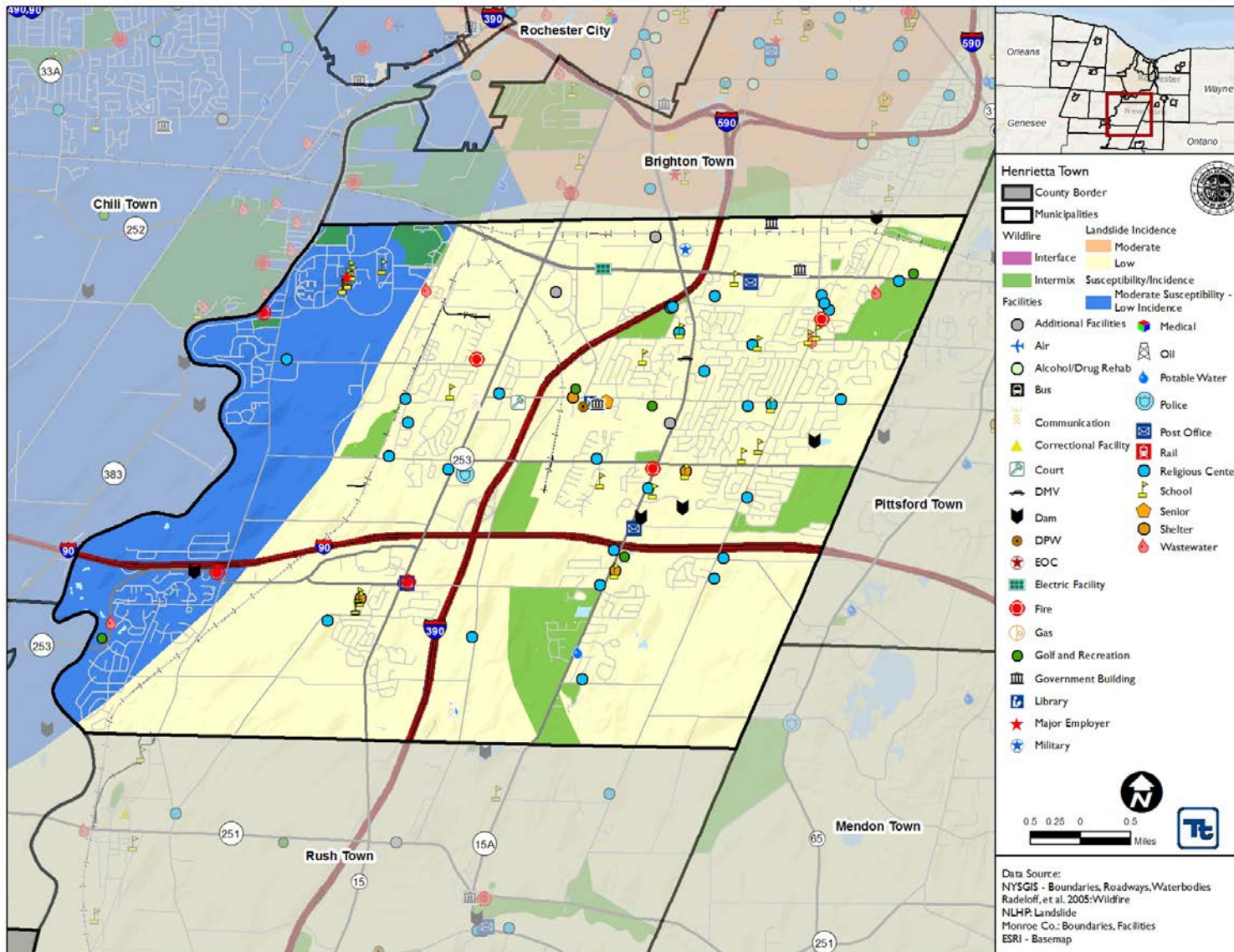
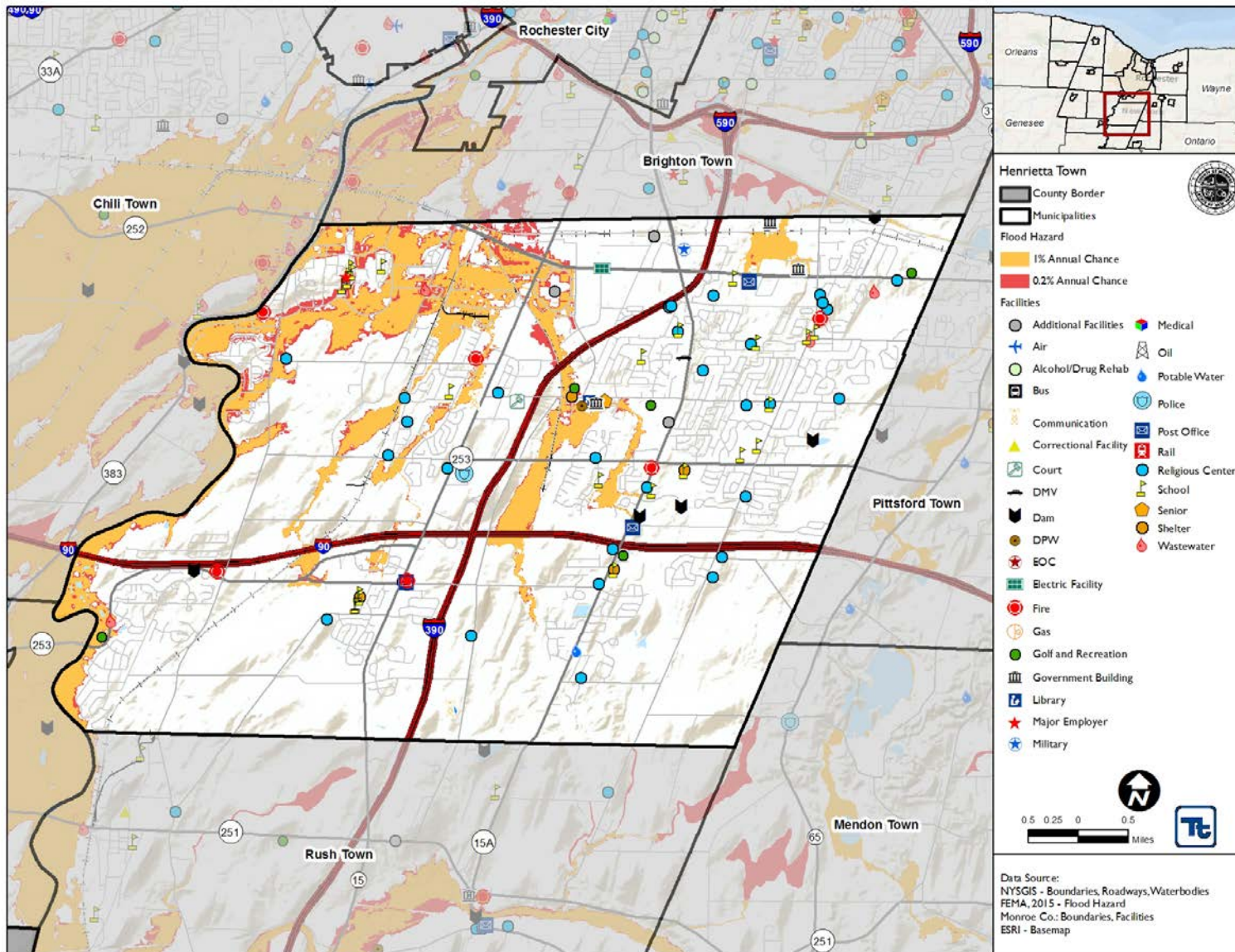




Figure 9.12-2. Town of Henrietta Hazard Area 1% and 0.2% Floodplain Map





Name of Jurisdiction: Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet: Christopher E. Martin, PE – Director of Engineering & Planning
Action Number: TH-1
Mitigation Action Name: Castle Road Culvert Repair

Assessing the Risk	
Hazard(s) addressed:	Flooding and Utility Failure
Specific problem being mitigated:	The invert of an existing 11-foot, 8-inch span by 7-foot, 8-inch rise corrugated metal pipe arch has deteriorated and needs to be repaired.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	The options are to repair the culvert invert, replace the culvert, slip line the culvert with a smaller diameter pipe, or perform continual maintenance on the culvert.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Town is considering to repair the invert of the pipe arch by removing the deteriorated metal, attaching welded wire mesh to the bottom of the culvert, and installing 3 to 4 inches of Portland cement concrete to the invert.
Mitigation Action Type	SIP
Goals Met	2, 3
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	The benefits of this option are: avoid Castle Road from being closed resulting in having traffic detoured, it is the least expensive option, and it will prevent potential property damage if the culvert collapsed.
Estimated Cost	Low - under \$10,000
Priority*	High
Plan for Implementation	
Responsible Organization	Town of Henrietta Engineering Department and the Department of Public Works
Local Planning Mechanism	The project will be designed by the Henrietta Engineering Department.
Potential Funding Sources	Town of Henrietta
Timeline for Completion	The project should be completed within the next 2 years.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: August 14, 2014 Progress on Action/Project: The plan for rehabilitating the existing culvert has been prepared.



Action Number: TH-1

Mitigation Action Name: Castle Road Culvert Repair

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Eliminates the culvert collapsing and prevents upstream flooding.
Property Protection	1	Repairing the culvert reduces property damage due to flooding.
Cost-Effectiveness	1	This option is the least expensive.
Technical	1	This action is technically feasible.
Political	1	This action would probably be supported by the public and Town Board.
Legal	1	The Town has the authority to have the culvert repaired.
Fiscal	1	The culvert repair can be funded from money collected from the Town Drainage Fund.
Environmental	0	A permit may be required from the New York State Department of Environmental Conservation.
Social	1	By not closing the road, local traffic will not be disrupted or detoured.
Administrative	1	The Town has the capabilities to implement and maintain the culvert repair.
Multi-Hazard	1	The action will prevent flooding and utility failures.
Timeline	1	This project can be completed within the next 2 years.
Agency Champion	1	The Town Board is a strong advocate for repairing the culvert.
Other Community Objectives	0	
Total	12	
Priority (High, Med or Low)	High	



Name of Jurisdiction: Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet: Chuck Marshall, Commissioner of Public Works
Action Number: TH-2
Mitigation Action Name: Two-Way Radio System Replacement Project

Assessing the Risk	
Hazard(s) addressed:	All hazards
Specific problem being mitigated:	Improvement and interoperability of communications
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	Two-way radio system replacement project – Selected action Do nothing – vulnerability continues
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase of NE and compatible brands for radio system.
Mitigation Action Type	Structure and Infrastructure Protection (SIP), Education and Awareness Program (EAP)
Goals Met	All goals met
Applies to existing and or new development, or not applicable	N/A
Benefits (losses avoided)	Improve communications with field crews and mutual assistance agencies during an emergency.
Estimated Cost	High = greater than \$100,000.00
Priority*	High
Plan for Implementation	
Responsible Organization	Town of Henrietta and selected contractor
Local Planning Mechanism	Town in-house staff
Potential Funding Sources	Grant monies from state sources
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: February 3, 2016 Progress on Action/Project: Awaiting confirmation of funding



Action Number:

TH-2

Mitigation Action Name:

Two-Way Radio System Replacement Project

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Shorten notification of responding units
Property Protection	0	
Cost-Effectiveness	1	Ability to dispatch the closest unit more efficiently
Technical	0	
Political	0	
Legal	1	Authority to implement project
Fiscal	1	Awaiting confirmation on funding from the state source; could be added to a future local budget if needed
Environmental	0	
Social	0	
Administrative	1	Ability to track vehicles and manpower, improve response times
Multi-Hazard	1	System will be used for all hazards encountered
Timeline	1	Looking to complete within 1 year of the money being allocated
Agency Champion	1	Commissioner of Public Works
Other Community Objectives	1	Interoperability with adjacent agencies
Total	10	
Priority (High, Med or Low)	High	



Name of Jurisdiction: Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet: Christopher E. Martin, PE – Director of Engineering & Planning
Action Number: TH-4
Mitigation Action Name: Veterans Memorial Park Overflow Sanitary Sewer

Assessing the Risk	
Hazard(s) addressed:	Utility Failure
Specific problem being mitigated:	During extreme storm events, the sanitary trunk sewer serving the east side of Henrietta has been known to surcharge, causing sewage to enter the storm sewer system causing basements to flood.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	The options are to install a parallel sanitary sewer, reduce the inflow and infiltration within the sanitary sewer system to create capacity in the sewer, or to transfer the overflow sewage to another trunk sewer that has additional capacity.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Town is considering having an overflow sanitary sewer installed to transfer sewage from one trunk sewer to another. The gravity trunk sewer would be approximately 2,100 linear feet and 12 inches in diameter.
Mitigation Action Type	Structure and Infrastructure Protection (SIP)
Goals Met	2, 3
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	The benefits from installing the overflow sewer are: it will eliminate sewage from entering the storm sewer system and creeks, and it will reduce or eliminate sewage from backing up into residential basements.
Estimated Cost	\$220,000
Priority*	High
Plan for Implementation	
Responsible Organization	The Town of Henrietta Engineering Department will oversee the design and construction of the project.
Local Planning Mechanism	Passero Associates will design the overflow sanitary sewer, and a private contractor will construct the sewer.
Potential Funding Sources	The project will be funded by a private developer.
Timeline for Completion	The project should be completed by the end of 2016.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: January 28, 2016 Progress on Action/Project: The plan for constructing the sanitary overflow sewer has been prepared.



Action Number: TH-4

Mitigation Action Name: Veterans Memorial Park Overflow Sanitary Sewer

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	The action will either reduce or eliminate basements from flooding.
Cost-Effectiveness	1	This option costs less than installing a parallel trunk sewer or eliminating inflow and infiltration from the sewer system.
Technical	1	The action is technically feasible.
Political	1	The action is supported by the Town Board.
Legal	1	The Town has the authority to implement the action.
Fiscal	1	The cost of installing the sanitary overflow sewer will be borne by a developer.
Environmental	1	The proposed action will prevent untreated sewage from entering the storm sewer system and creeks.
Social	1	The proposed action will have a positive impact on the adjacent downstream subdivision.
Administrative	1	The Town has the capability to implement and maintain the sanitary sewer overflow pipe.
Multi-Hazard	0	The proposed action only prevents a hazard to our sanitary sewer infrastructure.
Timeline	1	This project can be completed by the end of 2016.
Agency Champion	1	The Town Board is a strong advocate for this project.
Other Community Objectives	1	The proposed action increases the potential for upstream developments by creating capacity in the sanitary sewer system.
Total	12	
Priority (High, Med or Low)	High	



Name of Jurisdiction: Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet: Christopher E. Martin, PE – Director of Engineering & Planning
Action Number: TH-5
Mitigation Action Name: Beckwith Road Stormwater Management Facility

Assessing the Risk	
Hazard(s) addressed:	Flooding
Specific problem being mitigated:	Flooding has occurred during extreme storm events along a creek in the Mapledale Subdivision between Beckwith Road and Campus Drive. Also, this section of the creek is difficult to maintain due to the lack of vertical elevation.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	The options are to install a stormwater management facility or to do nothing.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Town is considering turning the existing drainage way into a stormwater management facility that will reduce downstream flooding and create an enhancement to the area by providing trails and benches around the pond.
Mitigation Action Type	Natural Resource Protection (NRP)
Goals Met	2
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	The benefits of installing the stormwater management area are: it will reduce downstream flooding, reduce drainage maintenance, and create an amenity for the neighboring residents.
Estimated Cost	\$180,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town of Henrietta Engineering Department and the Department of Public Works.
Local Planning Mechanism	The project will be designed by the Henrietta Engineering Department with help from outside consultants.
Potential Funding Sources	Town of Henrietta
Timeline for Completion	The project could be completed within the next 5 years.
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: December 18, 2015 Progress on Action/Project: A conceptual grading plan has been prepared for the design of the stormwater facility.



Action Number: TH-5

Mitigation Action Name: Beckwith Road Stormwater Management Facility

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	This action will reduce downstream flooding.
Cost-Effectiveness	0	The action is feasible, but will be very expensive.
Technical	1	The action is technically feasible.
Political	0	A neighborhood meeting will be required to see if the project has public support.
Legal	1	The Town has the authority to implement the action.
Fiscal	0	Additional funds may be required to implement the action due to its associated cost.
Environmental	1	The stormwater pond has the potential to improve water quality.
Social	0	This action will have very little impact on the community.
Administrative	1	The Town has the capability to construct the stormwater facility.
Multi-Hazard	0	The proposed action will only help prevent downstream flooding.
Timeline	1	The project can be designed and constructed within the next 5 years.
Agency Champion	1	The Town's Department of Public Works is a strong advocate of the project.
Other Community Objectives	0	
Total	7	
Priority (High, Med or Low)	Medium	



Name of Jurisdiction: Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet: Christopher E. Martin, PE – Director of Engineering & Planning
Action Number: TH-6
Mitigation Action Name: Sanitary Manhole Repair Program

Assessing the Risk	
Hazard(s) addressed:	Utility Failure
Specific problem being mitigated:	Stormwater is entering the Town’s sanitary sewer system through inflow and infiltration at some of the manholes.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	The options are to initiate a program to evaluate existing sanitary manholes and repair the manholes that are in poor condition and are allowing water to enter the system, or to leave the manholes in their current condition.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The action consists of initiating a manhole repair program where the manholes would be inspected and the ones that need repair or rehabilitation would be fixed.
Mitigation Action Type	Structure and Infrastructure Protection (SIP)
Goals Met	2
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	The benefit of repairing the sanitary manholes is that it will prevent inflow and infiltration from entering into the sewer system, thereby increasing the sewer capacity and reducing sewer overflows.
Estimated Cost	\$20,000 per year
Priority	Medium
Plan for Implementation	
Responsible Organization	The Town of Henrietta Engineering Department will oversee the inspections of the manholes, and will prepare plans and specifications for bidding purposes.
Local Planning Mechanism	The Town of Henrietta Engineering Department will oversee the inspections of the manholes, and will prepare plans and specifications for bidding purposes. A contractor will be responsible for making the repairs.
Potential Funding Sources	Town of Henrietta
Timeline for Completion	The project could be initiated within the next 2 years (Short then ongoing).
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Spring 2014 Progress on Action/Project: A manhole inspection form was generated and over 200 manholes have been inspected.



Action Number: TH-6

Mitigation Action Name: Sanitary Manhole Repair Program

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	By reducing infiltration and inflow, sewage overflows will be reduced. Also by replacing manhole steps in poor condition, it may prevent injuries to personnel entering the manholes.
Cost-Effectiveness	1	The cost associated with implementing this program is high, but it will provide additional capacity in the sewer system.
Technical	1	This action is technology feasible.
Political	1	This action would probably be supported by the Town Board.
Legal	1	The Town has the authority to implement this plan.
Fiscal	1	This program can be funded from the money collected from the Town sanitary sewer fund.
Environmental	1	The proposed manhole repair program can help to reduce the amount of sewer overflows.
Social	0	
Administrative	0	The Town has the capability to implement the program, but we will need outside help to make the necessary repairs.
Multi-Hazard	0	The proposed action only prevents a hazard to our sanitary sewer infrastructure.
Timeline	1	This project could be initiated by the end of 2017.
Agency Champion	1	The Town Engineering Department and Department of Public Works are a strong advocate for this project.
Other Community Objectives	0	
Total	9	
Priority (High, Med or Low)	Medium	



Name of Jurisdiction:	Town of Henrietta, Monroe County, NY
Name and Title Completing Worksheet:	Christopher E. Martin, PE – Director of Engineering & Planning
Action Number:	TH-7
Mitigation Action Name:	Culvert Maintenance Program

Assessing the Risk	
Hazard(s) addressed:	Flooding and Utility Failure
Specific problem being mitigated:	A program needs to be developed to evaluate the roadway culverts that are located within the Town.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	The options are to initiate a program to evaluate existing roadway culverts and to repair or replace the culverts that are in poor condition, or to leave the culverts in their current condition.
Action/Project Intended for Implementation	
Description of Selected Action/Project	The action consists of initiating a culvert maintenance program where the culverts would be inspected and the ones that need maintenance or replacement would be fixed.
Mitigation Action Type	Structure and Infrastructure Protection (SIP)
Goals Met	2
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	The benefit of providing an inspection and maintenance program is that it would identify culverts that are in need of maintenance or replacement.
Estimated Cost	\$10,000 to \$100,000 per year.
Priority*	High
Plan for Implementation	
Responsible Organization	The Town of Henrietta Engineering Department will oversee the inspections of the culverts and will work with the Department of Public Works on a maintenance, repair, and replacement program.
Local Planning Mechanism	The Town of Henrietta Engineering Department will oversee the inspections of the culverts, and will prepare plans and specifications for bidding purposes if necessary. Smaller culverts can be replaced by Town staff, but larger structures will need to be installed by a contractor.
Potential Funding Sources	Town of Henrietta
Timeline for Completion	The project could be initiated by the end of 2016 (Short then ongoing).
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Spring 2014 Progress on Action/Project: A Culvert Inspection Program was developed and the majority of the culverts located across Town roads have been inspected.



Action Number:

TH-7

Mitigation Action Name:

Culvert Maintenance Program

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The inspection program would help reduce potential flooding and culvert failure.
Property Protection	1	Providing maintenance to the Town's culverts reduces the risk for flooding and damage to property.
Cost-Effectiveness	1	The cost associated with implementing this program is high, but it will provide additional capacity in the sewer system.
Technical	1	This action is technology feasible.
Political	1	This action would probably be supported by the Town Board.
Legal	1	The Town has the authority to implement this plan.
Fiscal	1	This program can be funded from the money collected from the Town drainage fund.
Environmental	1	The proposed culvert maintenance program can help to reduce the potential for flooding.
Social	0	
Administrative	0	The Town has the capability to implement the program and replace the smaller culverts, but needs outside contractors to replace the larger culverts.
Multi-Hazard	1	The proposed action reduces the potential for flooding and improves Town infrastructure.
Timeline	1	This project could be initiated by the end of 2016.
Agency Champion	1	The Town Engineering Department and Department of Public Works are a strong advocate for this project.
Other Community Objectives	0	
Total	11	
Priority (High, Med or Low)	High	



Name of Jurisdiction: Rochester Institute of Technology (Town of Henrietta)
Name and Title Completing Worksheet: Lynn Daley, Director of Business Continuity, RIT
Action Number: TH-8
Mitigation Action Name: Alternate Fuel Source for Emergency and Standby Generators for RIT

Assessing the Risk	
Hazard(s) addressed:	Utility Failure (Gas, Electricity), Flood
Specific problem being mitigated:	Emergency generators and several standby generators for critical functions use natural gas as their fuel source. Loss or interruption of natural gas would eliminate this capability and have a significant impact should a power failure occur as well.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	<ol style="list-style-type: none"> 1. Store liquid natural gas on campus to use if commercial supply of natural gas is interrupted 2. Add means to connect alternative fuel source to generators
Action/Project Intended for Implementation	
Description of Selected Action/Project	Add means to connect alternative fuel source to generators (#2 fuel oil)
Mitigation Action Type	Structure and Infrastructure Protection (SIP)
Goals Met	3. Protect life, property and the environment from hazard impacts
Applies to existing and or new development, or not applicable	Existing and New
Benefits (losses avoided)	Loss of function of critical services (data center, sump pumps, emergency lighting and fire/gas detection systems); facility damage due to inability to remove flood waters from basement areas
Estimated Cost	Medium (\$10,000 to \$100,000)
Priority*	High
Plan for Implementation	
Responsible Organization	RIT Facilities Management Services
Local Planning Mechanism	Facilities Management Services (FMS) working with contracted service provider
Potential Funding Sources	Grant funding with local cost share for existing facilities Local funding for new facilities
Timeline for Completion	Long Term - > 5 years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project: N/A



Action Number:

TH-8

Mitigation Action Name:

Alternate Fuel Source for Emergency and Standby Generators for RIT.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduce risk of accidents from utility failures
Property Protection	1	Ensure RIT facilities remain operational
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Utility Failure, Flood
Timeline	1	
Agency Champion	1	FMS
Other Community Objectives	0	
Total	12	
Priority (High, Med or Low)	High	



Name of Jurisdiction:	Rochester Institute of Technology, Town of Henrietta
Name and Title Completing Worksheet:	Lynn Daley, Director of Business Continuity
Action Number:	TH-9
Mitigation Action Name:	Pipe (Water and Sanitary) Freezing – Below Ground (RIT)

Assessing the Risk	
Hazard(s) addressed:	Extreme Temperatures – Freezing
Specific problem being mitigated:	Freezing in piping (water and sanitary) below ground near buildings 50B, 50C, and 55. Current piping is less than 6 feet below ground making it susceptible to freezing.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	<ol style="list-style-type: none"> 1. Install electric trace heating with associated insulation around below ground pipes that are not below the 100-year freezing depth guidelines. 2. Lower piping to 6 feet below ground to make them lower than the 100-year freezing depth guidelines.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Lower piping at RIT to 6 feet below ground to make it lower than the 100-year freezing depth guidelines.
Mitigation Action Type	Structure and Infrastructure Project (SIP)
Goals Met	3. Protect life, property, and the environment from hazard impacts
Applies to existing and or new development, or not applicable	Existing and new
Benefits (losses avoided)	Physical property damage; loss of function; business interruption
Estimated Cost	Medium = \$10,000 to \$100,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	RIT Facilities Management Services
Local Planning Mechanism	FMS working with contracted service providers
Potential Funding Sources	Grant funding with local cost share for existing facilities Local funding for new facilities
Timeline for Completion	Short Term = 1 to 5 years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project: N/A



Action Number:

TH-9

Mitigation Action Name:

Pipe (water and sanitary) Freezing – Buildings (RIT)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduce associated health problems should pipes freeze (lack of running water for sinks and toilets, inability to wash hands, possibly secondary utility failures leading to lack of heating and ventilation)
Property Protection	1	Reduce number of pipes freezing
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	1	
Environmental	1	
Social	0	
Administrative	0	
Multi-Hazard	0	
Timeline	1	Short-Term
Agency Champion	1	FMS
Other Community Objectives	0	
Total	8	
Priority (High, Med or Low)	Medium	



Name of Jurisdiction: Rochester Institute of Technology, Town of Henrietta
Name and Title Completing Worksheet: Lynn Daley, Director of Business Continuity
Action Number: TH-10
Mitigation Action Name: Pipe (Water and Sanitary) Freezing – Buildings (RIT)

Assessing the Risk	
Hazard(s) addressed:	Extreme Temperatures
Specific problem being mitigated:	Freezing in piping (water and sanitary) in buildings.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	Do nothing – problem continues or worsens
Action/Project Intended for Implementation	
Description of Selected Action/Project	Install electric trace heating with associated insulation for water and sanitary pipes of concern.
Mitigation Action Type	Structure and Infrastructure Project (SIP)
Goals Met	3. Protect life, property, and the environment from hazard impacts
Applies to existing and or new development, or not applicable	Existing and new
Benefits (losses avoided)	Physical property damage; loss of function; business interruption
Estimated Cost	High = >\$100,000
Priority*	Medium
Plan for Implementation	
Responsible Organization	RIT Facilities Management Services
Local Planning Mechanism	FMS planners and engineers working with contracted service providers
Potential Funding Sources	Grant funding with local cost share for existing facilities Local funding for new facilities
Timeline for Completion	Short Term = 1 to 5 years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project: N/A



Action Number:

TH-10

Mitigation Action Name:

Pipe (water and sanitary) Freezing – Buildings (RIT)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduce associated health problems should pipes freeze (lack of running water for sinks and toilets, inability to wash hands, possibly secondary utility failures leading to lack of heating and ventilation)
Property Protection	1	Reduce number of pipes freezing
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	1	
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	0	
Timeline	1	Short-Term
Agency Champion	1	FMS
Other Community Objectives	1	
Total	10	
Priority (High, Med or Low)	Medium	



Name of Jurisdiction: Rochester Institute of Technology, Town of Henrietta
Name and Title Completing Worksheet: Lynn Daley, Director of Business Continuity
Action Number: TH-11
Mitigation Action Name: Red Creek Drainage (RIT)

Assessing the Risk	
Hazard(s) addressed:	Flood, Dam Failure
Specific problem being mitigated:	Red Creek is 90% silted in a section north of the campus, which leads to insufficient drainage capacity into the Erie Canal. Red Creek runs through campus, and during periods of heavy and/or sustained rains and snow/ice melt, multiple areas on campus flood. This issue would exacerbate riverine flooding conditions on campus.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	<ol style="list-style-type: none"> 1.Rebuild affected buildings, roadways and parking lots at higher elevations 2. Building retaining ponds and pump flood waters to them 3. Divert the southern branch of Red Creek to the Genesee River
Action/Project Intended for Implementation	
Description of Selected Action/Project	Dredge the northern end of Red Creek where it drains into the Erie Canal.
Mitigation Action Type	Natural Systems Protection (NSP)
Goals Met	<ol style="list-style-type: none"> 1. Coordinate hazard mitigation programs that affect the County 3. Protect life, property, and the environment from hazard impacts 5. Protect, preserve and restore the functions of natural systems
Applies to existing and or new development, or not applicable	N/A
Benefits (losses avoided)	Physical property damage; loss of function; business interruption; road closing and detours
Estimated Cost	High = >\$100,000
Priority*	High
Plan for Implementation	
Responsible Organization	RIT Facilities Management Services
Local Planning Mechanism	FMS and EHS work with local and county planners
Potential Funding Sources	Grant funding with local cost share, local funding
Timeline for Completion	Long Term - > 5 years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project: N/A



Action Number: TH-11

Mitigation Action Name: Red Creek Drainage (RIT)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduce risk of accidents from campus flooding
Property Protection	1	Reduce property damage on campus and surrounding areas
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	1	
Fiscal	1	
Environmental	1	Clean and enhance local drainage of Red Creek
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Dam Failure
Timeline	1	
Agency Champion	1	FMS
Other Community Objectives	0	
Total	12	
Priority (High, Med or Low)	High	



Name of Jurisdiction:	Rochester Institute of Technology, Town of Henrietta
Name and Title Completing Worksheet:	Lynn Daley, Director of Business Continuity
Action Number:	TH-12
Mitigation Action Name:	RIT Building Roof Snow/Ice Load (RIT)

Assessing the Risk	
Hazard(s) addressed:	Severe Winter Storm – Heavy Snow; Ice Storm
Specific problem being mitigated:	Heavy snow (particularly over a short period of time) may exceed the load capacity of building roofs, leading to structural damage, leaking and/or collapse.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	<ol style="list-style-type: none"> 1. Increase structural capacity of roofs to handle additional load – not cost effective; time-consuming; operational interruptions 2. Change slope and surface of roofs to limit the amount of snow/ice that may accumulate on roofs – not cost effective; time-consuming; operational interruptions
Action/Project Intended for Implementation	
Description of Selected Action/Project	Install snow/ice melt system on roofs (electrical, hot water, etc.) that can be engaged when snows/icing are predicted to produce loads of concern.
Mitigation Action Type	Structure and Infrastructure Project (SIP)
Goals Met	3. Protect life, property, and the environment from hazard impacts
Applies to existing and or new development, or not applicable	Existing and new
Benefits (losses avoided)	Casualties (killed, injured); Physical property damage; loss of function; business interruption
Estimated Cost	High = >\$100,000
Priority*	High
Plan for Implementation	
Responsible Organization	RIT Facilities Management Services
Local Planning Mechanism	FMS engineers and project managers working with contracted service providers; Town of Henrietta
Potential Funding Sources	Grant funding with local cost share for existing facilities Local funding for new facilities
Timeline for Completion	> 5 years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:N/A



Action Number:

TH-12

Mitigation Action Name:

RIT Building Roof Snow/Ice Load (RIT)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduce risk of building collapse injuring students, staff, and faculty
Property Protection	1	Reduce risk of damage to RIT facilities
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	1	
Environmental	-1	
Social	1	
Administrative	-1	
Multi-Hazard	1	
Timeline	1	Severe Winter Storm – Heavy Snow; Ice Storm
Agency Champion	1	FMS
Other Community Objectives	1	
Total	9	
Priority (High, Med or Low)	High	