



## 9.25 VILLAGE OF MILLBROOK

This section presents the jurisdictional annex for the Village of Millbrook.

### 9.25.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Rod Brown, Mayor 845-901-0390 rbmayor@villageofmillbrookny.com	Mike Herzog, Trustee 845-913-6371 mike.herzogvom@gmail.com

### 9.25.2 Municipal Profile

The Village of Millbrook is located in the central region of Dutchess County; it is located within the Town of Washington. Major waterways include the East Branch Wappinger Creek, and Mill Brook, which flow through the northwest and northeast region of the Village, respectively. According to the U.S. Census, the 2010 population for the Township was 1,452, and the total area is 1.9 square miles, 1.9 square miles of land and 0.1 square miles of water.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in Section 9.25.8 of this annex which illustrates the hazard areas along with the location of potential new development.

**Table 9.25-1. 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
<b>Recent Development from 2010 to present</b>					
None identified by the Village					
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
Bennett College Revitalization Project	Mixed Use, BCD	10	7-8 Bennett Common 135801-6764-01-283780, 6764-01-346799, 6764-01-353764	In ground oil tanks, possible lead paint	Surveying, Demolition and planning stage
Thorne Memorial Building	Community service, abandoned school	3	3323 Franklin Avenue 135801-6765-19-548131	Lead paint	Preparing to list for sale

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

### 9.25.3 Natural Hazard Event History Specific to the Municipality

Dutchess 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, events that have occurred in the County from 2008 to present 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 the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.25-2. Hazard Event History**

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
March 30, 2010	Strong Winds	N/A	No	Yes, tree damage and debris removal; DPW and Police overtime
December 26-27, 2010	Severe Winter Storm and Snowstorm / Nor'easter	N/A	Yes	Yes, Nothing outside of overtime and snow removal, salt and sand usage; DPW and Police overtime
March 11-13, 2011	Heavy Rainfall, Snowmelt, Ice Jams	N/A	N/A	Yes, tree damage and debris removal; excessive flows strained wastewater treatment facility; DPW overtime
August 26 – September 5, 2011	Hurricane Irene	DR-4020	Yes	Yes, tree damage and debris removal; road raised and washout, fence repair, storm drain over capacity, fire dispatched to pump out basement; Road washouts on Nine Partners Lane, Church Street and Standford Road; flooding at water treatment plant in Mabbettsville; Fencing around water treatment plant and bandshell roof damaged due to fallen trees, propane tank at plant compromised; Overtime for DPW and Police – volunteer fire pumped basements for 36 hours
September 5-8, 2011	Remnants of Tropical Storm Lee	N/A	No	Yes, tree damage and debris removal, stormwater over capacity; DPW overtime
October 29-30, 2011	Nor'easter, Heavy Snow	N/A	N/A	Yes, flooding conditions, fire dispatched to pump out basements; widespread utility outages; DPW and Police overtime; Disposal of residential tree damage and debris
October 27 – November 8, 2012	Hurricane Sandy	N/A	Yes	Yes, major rain event caused scattered tree damage and excessive stormwater flows; Overtime for DPW and Police – volunteer fire pumped basements for 48 hours
May to August 2013	Storm Water Emergency, Heavy Rain Event, Storm Water Flooding	N/A	No	Yes, Catch basin on Elm Drive exceeded capacity and overflow caused damage to private properties – driveway washout, fence repair, landscape and pool damage, debris removal; DPW overtime
February 12-13, 2014	Winter Storm	N/A	N/A	Yes, major rain event caused scattered tree damage and excessive stormwater flows; widespread utility outages
July 23, 2014	Thunderstorm and Lightning	N/A	N/A	Yes, major rain event caused scattered tree damage and excessive stormwater flows; widespread utility outages; DPW and Police overtime



### 9.25.4 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 Village of Millbrook. 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 Village of Millbrook.

**Table 9.25-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Coastal Storm	100-year MRP: \$349,132.00 500-year MRP: \$2,525,406.00 Annualized: \$32,764.00	Frequent	48	High
Drought	Damage estimate not available	Frequent	42	High
Earthquake	100-Year GBS: \$0 500-Year GBS: \$118,607 2,500-Year GBS: \$1,465,348	Occasional	24	Medium
Extreme Temperature	Damage estimate not available	Frequent	30	Medium
Flood	1% Annual Chance: \$239,535	Frequent	36	High
Severe Storm	100-Year MRP: \$349,132 500-year MRP: \$2,525,406 Annualized: \$32,764	Frequent	48	High
Winter Storm	1% GBS: \$4,303,623 5% GBS: \$21,518,117	Frequent	51	High
Wildfire	Estimated Value in the WUI: \$699,739,418	Frequent	42	High

Notes:

GBS = General building stock; MRP = Mean return period.

- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 20-30+  
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. The earthquake and hurricane wind hazards were evaluated by Census tract. The Census tracts do not exactly align with municipal boundaries; therefore, a total is reported for each Town inclusive of the Villages. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 2.2 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the wildfire hazard, the improved value and estimated contents of buildings located within the identified hazard zones is provided.

#### National Flood Insurance Program (NFIP) Summary

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



**Table 9.25-4. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Village of Millbrook	15	0	\$0.00	0	0	0

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 12/31/2014. Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 12/31/14.

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

(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.

Notes: 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.

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

Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude

### 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 a 1- and 0.2-percent annual chance flood events.

**Table 9.25-5. 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 <sup>(1)</sup>
No critical facilities located in the FEMA 1% and 0.2% Flood Hazard Area						

Source: Dutchess County, NYGIS

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 2.1 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.

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:

- Public lacks sufficient knowledge on how to deal with emergency situations and what resources and services are available to them during an emergency situation.
- Above ground electric power lines and communication lines are susceptible to damage during



### 9.25.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

#### Planning and Regulatory Capability

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

**Table 9.25-6. 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.)
<b>Planning Capability</b>				
Master Plan	1985	Local	Board of Trustees	Village Master Plan
Capital Improvements Plan	2013	Local	Board of Trustees	Water/Sewer Capital Improvements Plan
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	In Progress	Local	Board of Trustees	Severe Weather, Emergency Management Plan
Open Space Plan	No			
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	1992, in Town of Washington	State	NYS Board of Health	Public Health Law Section 1100-1107 CH III (112.5)
Economic Development Plan	No			
Comprehensive Emergency Management Plan	2012	Local	Board of Trustees	Emergency Management Plan
Emergency Response Plan	2012, Joint with Town of Washington	Local	Board of Trustees	Emergency Management Plan
Post-Disaster Recovery Plan	No			
Transportation Plan	No	County		Receive DCPDCT Report
Strategic Recovery Planning Report	No			
Other Plans:				
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local	Village Building Dept. and NYS Uniform Code	Code of the Village of Millbrook, Building Codes of NYS
Zoning Ordinance	Yes		Zoning	Code of the Village of Millbrook, CH



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.)
			Enforcement Official	230 Zoning
Subdivision Ordinance	No			
NFIP Flood Damage Prevention Ordinance	Yes	Local	Building Inspector	Chapter 115 of the Code of the Village of Millbrook
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	Building Inspector	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	Planning Code	Code of the Village of Millbrook
Stormwater Management Ordinance	In progress	Local	Board of Trustees	Code of the Village of Millbrook
Municipal Separate Storm Sewer System (MS4)	N/A			
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	No			

### Administrative and Technical Capability

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

**Table 9.25-7. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Town of Washington/Village of Millbrook Conservation Advisory Committee
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Fire Dept. and DC Emergency Management, Town of Washington IMA Snow Removal
<b>Technical/Staffing Capability</b>		
Planner(s) or Engineer(s) with knowledge of land	Yes	Planning Board Consultant, David Clouser and



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
development and land management practices		Associates
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Delaware Engineering as Consultant
Planners or engineers with an understanding of natural hazards	Yes	Delaware Engineering as Consultant and/or Eric Holt, Engineer
NFIP Floodplain Administrator	Yes	Code Enforcement Official and Building Inspector
Surveyor(s)	No	
Personnel skilled or trained in GIS and/or HAZUS-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Fire Dept. Chief
Grant Writer(s)	No	
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	No	

### Fiscal Capability

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

**Table 9.25-8. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes, Board of Trustees
Capital Improvements Project Funding	Yes, Board of Trustees
Authority to Levy Taxes for specific purposes	Yes, Board of Trustees
User fees for water, sewer, gas or electric service	Yes, Board of Trustees
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes, Board of Trustees
Incur debt through special tax bonds	Yes, Board of Trustees
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes, Board of Trustees
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	No
Other	

### Community Classifications

The table below summarizes classifications for community program available to the Village of Millbrook.

**Table 9.25-9. Community Classifications**

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No		
Building Code Effectiveness Grading Schedule (BCEGS)	Yes		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	6	2010



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Storm Ready	Yes		
Firewise	No		
Disaster/Safety Programs in/for Schools	No		
Organizations with Mitigation Focus (advocacy group, non-government)	No		
Public Education Program/Outreach (through website, social media)	No		
Public-Private Partnerships	No		

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

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

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

### Self-Assessment of Capability

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

**Table 9.25-10. Self-Assessment Capability for the Municipality**

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability	X - Staffing and Budget		
Fiscal Capability	X - Staffing and Budget		
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)

---

Kenneth McLaughlin, CEO and BI

### Flood Vulnerability Summary

---

The Village does not maintain a list of properties that have experienced flood damage; the village did not receive extensive property or structural damage as a result of Hurricanes Floyd, Irene or Sandy.

### Resources

---

The NFIP FPA is the sole person responsible for floodplain administration in the Village; the services and responsibilities provided by the FPA include building permit review and flood zone determination for properties. The FPA indicated that education is a barrier to running an effective floodplain management program and would attend continuing education and/or certification training on floodplain management if it were offered in the County for local floodplain managers.

### Compliance History

---

The Community is currently in good-standing in the NFIP, and the latest compliance audit was conducted in the Summer of 2014.

### Regulatory

---

The Planning Board takes into account the floodplain and flood risk when reviewing sites plans and variances. The Community has considered joining the CRS program and would attend a CRS seminar if it were offered locally.

### Community Rating System

---

The Village of Millbrook does not participate in the Community Rating System (CRS) program.

### 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 Village 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 SEQRA and Federal NEPA requirements.

**Millbrook Village Master Plan 1985:** This Master Plan included the identification of natural hazard features, including steep slopes, wetlands, and flood plains. The plan included the following recommendations to help mitigate the potential impacts of these identified hazards:



1. **Protect Environmental Corridors:** The natural drainage network should be protected. The village should establish protective isolation distances of fifty feet for buildings and seventy-five feet for septic systems for the long term integrity of its stream corridors. It should require retention facilities for new development that might otherwise accelerate the rate of runoff.

**Conservation Planning:** The Town of Washington has a Conservation Advisory Council is tasked with advising the Village Board on matters effecting pollution and conservation of natural resources within the Village.

### Regulatory and Enforcement

---

**Flood Damage Prevention Chapter 115:** It is the purpose of this chapter to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

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

**Zoning Code Chapter 230:** the Village's zoning code includes districts and standards pertaining to the mitigation of hazards. These sections include the Floodplain regulations, stormwater management & erosion control standards.

**Site Plan/Subdivision Review Chapter 201:** 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 with flooding or steep slopes.

**Building Code Chapter 105:** The building codes are strictly enforced to make new and renovated buildings as prepared as possible for hazard related incidents. The chapter includes a provision to allow the building inspector to make emergency repairs to protect the health safety and welfare of the residents.

### Fiscal

---

**Operating Budget:** The Village's operating budget contains minimal provisions for expected repairs like snow removal and infrastructure repair after a storm or natural disaster.

### Education and Outreach

---

The Town has an email delivery system to disseminate information to residents and business owners. The Planning Department is a member of the Dutchess County Planning Federation and attends trainings and researches best practices that other communities are implementing. DPW takes classes and implements in hazardous reduction techniques in various capital improvements. The Town has planned to budget for training for personal including professional development geared towards health and safety.



### 9.25.6 Mitigation Strategy and Prioritization

---

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

#### **Past Mitigation Initiative Status**

---

The following table indicates progress on the community's mitigation strategy identified in the 2010 Plan. Actions that are carried forward as part of this Plan are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.



**Table 9.25-11. Past Mitigation Initiative Status**

2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2015 HMP? or Discontinue)	Describe Next Step
Millbrook 1: Inflow & infiltration mitigation, sewer reduction mitigation	DPW	In Progress	1.40% Complete 2. Multiple actions report to NYS DEC Annually 3. Local Budget	Include in 2015 HMP	1. Complete Investigation & Plan 2. Ex. Sump Pump Removal from Waste Water System
Millbrook 2: Stormwater mitigation project on Elm Dr and Front St	DPW	Complete	1. Installation of larger pipes, 100% 2. N/A 3. 100%, Local budget	Discontinue	1. Project Complete
Millbrook 3: Mapping of stormwater municipal system with future capital mitigation projects	Board of Trustees	In Progress	1. 100% Complete 2. N/A 3. Local Budget	Include in 2015 HMP	1. Mapping Complete 2. Use camera to inspect system
Millbrook 4: Drainage Remediation Program on Nine Partners Lane	DPW	Complete	1. 100% Complete 2. N/A 3. Local Budget	Discontinue	1. Project Complete



### **Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy**

The Village of Millbrook has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- The Village completed a Drainage Remediation program on Nine Partners Lane.

### **Proposed Hazard Mitigation Initiatives for the Plan**

The Village of Millbrook participated in a mitigation action workshop in May 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.25-12 summarizes the comprehensive-range of specific mitigation initiatives the Village of Millbrook 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. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.25-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan.



**Table 9.25-12. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
VOM-1	Alden Terrace Condos	Existing	Flooding, Coastal Hazard, Severe Storm	G-1, G-2	Town/DPW	High	High	Grant/Local Budget	DOF	High	SIP	SP; PP
VOM-2	Stormwater piping inspection	Existing	Flooding, Coastal Hazard, Severe Storm	G-1, G-2	Town/DPW	High	High	Grant/Local Budget	DOF	High	SIP	PP
VOM-3 (Old Millbrook 1)	Inflow & infiltration mitigation, sewer reduction mitigation	Existing	Flooding, Coastal Hazard, Severe Storm	G-1, G-2	DPW	High	High	Grant/Local Budget	DOF	High	SIP	PP
VOM-4 (Old Millbrook 3)	Mapping of stormwater municipal system with future capital mitigation projects	Existing	Flooding, Coastal Hazard, Severe Storm	G-1, G-2	Town/DPW	High	High	Grant/Local Budget	DOF	High	SIP	PP

**Notes:**

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

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

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program  
 PDM Pre-Disaster Mitigation Grant Program  
 RFC Repetitive Flood Claims Grant Program (discontinued)  
 SRL Severe Repetitive Loss Grant Program (discontinued)

Timeline:

Short 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:

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology)





Costs:

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 reapportionment 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:

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 construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities





**Table 9.25-13. 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
VOM-1	Alden Terrace Condos	1	1	1	1	1	0	-1	0	1	0	0	0	0	0	5	High
VOM-2	Stormwater piping inspection	0	1	1	1	1	1	0	0	0	1	0	1	0	0	7	High
VOM-3 (Old Millbrook 1)	Inflow & infiltration mitigation, sewer reduction mitigation	0	1	1	1	1	1	0	0	0	1	0	1	0	0	7	High
VOM-4 (Old Millbrook 3)	Mapping of stormwater municipal system with future capital mitigation projects	0	1	1	1	1	1	0	0	0	1	0	1	0	0	7	High

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



### **9.25.7 Future Needs To Better Understand Risk/Vulnerability**

---

None at this time.

### **9.25.8 Hazard Area Extent and Location**

---

Hazard area extent and location maps have been generated for the Village of Millbrook that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Millbrook has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

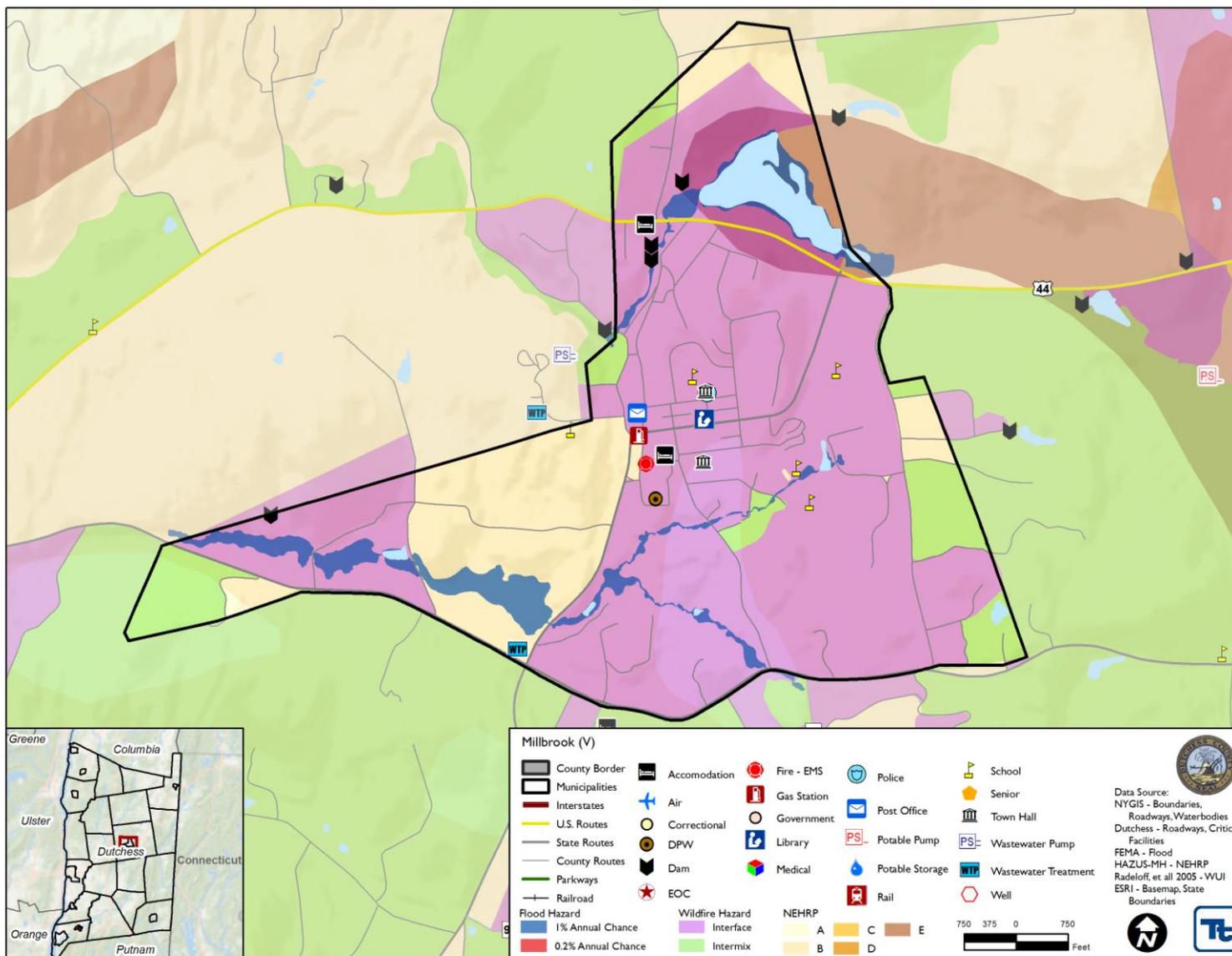
### **9.25.9 Additional Comments**

---

None at this time.



Figure 9.25-1. Village of Millbrook Hazard Area Extent and Location Map





Name and Title Completing Worksheet: Michael Herzog, Trustee  
 Action Number: VOM-1  
 Mitigation Action Name: Alden Terrace Condos Mitigation

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding; Coastal Hazards; Severe Storm
<b>Specific problem being mitigated:</b>	An undersized culvert lead to flooding of condo in 2013 & flooding threatened other condo units in Alden Terrace complex
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. No Action
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	A higher berm was erected after the flooding but water levels from subsequent storms have come very close to flooding other residences. Additional piping leading away from the site may be necessary. Potential use of constructed natural catch basin to store stormwater flows.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	G-1, G-2
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Town/DPW
<b>Local Planning Mechanism</b>	Board of Trustees
<b>Potential Funding Sources</b>	Grant/Local Funding
<b>Timeline for Completion</b>	DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 12/11/2015 Progress on Action/Project: New



**Action Number:**  
**Mitigation Action Name:**

VOM-1  
 Alden Terrace Condos Mitigation

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Complex contains residential units, placing a portion of the population in the floodplain
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	-1	Project would require additional funding
Environmental	0	
Social	1	
Administrative	0	
Multi-Hazard	0	
Timeline	0	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	<b>5</b>	
<b>Priority</b>	<b>High</b>	



Name and Title Completing Worksheet: Michael Herzog, Trustee  
 Action Number: VOM-2  
 Mitigation Action Name: Stormwater piping inspection

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding; Coastal Hazards; Severe Storm
<b>Specific problem being mitigated:</b>	Damaged and debris filled piping has led to increased sewer treatment costs and could potentially lead to increased flooding from stormwater runoff.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. No Action
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Stormwater piping in the Village of Millbrook needs to be camera inspected, evaluated and in some cases replaced. Inflows from leaking infrastructure may be contributing to excess inflows at sewer treatment plant causing increased processing costs.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	G-1, G-2
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Town/DPW
<b>Local Planning Mechanism</b>	Board of Trustees
<b>Potential Funding Sources</b>	Grant/Local Funding
<b>Timeline for Completion</b>	DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 07/30/17 Progress on Action/Project: Camera process continuing



Action Number: VOM-2  
 Mitigation Action Name: Stormwater piping inspection

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Infrastructure inspected to determine functionality and structural condition
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	<b>7</b>	
<b>Priority</b>	<b>High</b>	