9.29 VILLAGE OF RHINEBECK

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

9.29.1 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
John Fenton, Superintendent of Public Works and Code Enforcement 76 E. Market Street, Rhinebeck, NY 12572 (845) 876-1922 village.zeo@rhinebeck-ny.gov	Henry Campbell, Emergency Response Coordinator 76 E. Market Street, Rhinebeck, NY 12572 (845) 876-3678 chiefhac@aol.com

9.29.2 Municipal Profile

The Village of Rhinebeck was incorporated in 1834 and exists within the Town of Rhinebeck. The Village functions as a jurisdiction of government separate from the Town of Rhinebeck and is governed by a Mayor and four Trustees. The Village covers 1.6 square miles. The Village operates a Justice Court, Police Department, Fire Department, and Street Department as well as Water Treatment and Wastewater Treatment Facilities. There are several streams that run through the Village and include: Landsman Kill in the southern portion of the Village and the Rhinebeck Kill in the northern portion of the Village.

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 9.29.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.29-1. 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					
Northern Dutchess Hospital	Comm.	86,000 sq. ft.	6511 Springbrook, Rhinebeck, NY	None	75% Complete
Known or Anticipated Development in the Next Five (5) Years					
Village Inn	Comm.	46,000 sq. ft.; 65 units	26 W. Market, Rhinebeck, NY	None	Approved

* Only location-specific hazard zones or vulnerabilities identified.

9.29.3 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 9.29-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26-September 5, 2011	Hurricane Irene	DR-4020	Yes	The Village experienced damages to buildings and power outages as a result of Hurricane Irene. There was damage to a dam that caused it to fail. The
October 27-November 8, 2012	Hurricane Sandy	EM-3351	Yes	Hurricane Sandy downed trees and limbs which damaged vehicles.

9.29.4 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 Rhinebeck. 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 Rhinebeck.

Table 9.29-3. 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]
Coastal Storm	100-year MRP: $381,533.00 500-year MRP: $2,135,542.00 Annualized: $24,597.00	Frequent	48	High
Drought	Damage estimate not available	Frequent	42	High
Earthquake	100-Year GBS: $0 500-Year GBS: $177,691 2,500-Year GBS: $2,135,851	Occasional	24	Medium
Extreme Temperature	Damage estimate not available	Frequent	39	High
Flood	1% Annual Chance: $7,822,532	Frequent	36	High
Severe Storm	100-Year MRP: $381,533 500-year MRP: $2,135,542 Annualized: $24,597	Frequent	48	High
Winter Storm	1% GBS: $6,990,389 5% GBS: $34,951,947	Frequent	51	High
Wildfire	Estimated Value in the WUI: $1,022,290,694	Frequent	48	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 Rhinebeck.

Table 9.29-4. 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 Rhinebeck	11	7	$49,310.95	0	0	2

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 9.29-5. 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[1]
Central Pond Dam	Dam		X	-	-	-
East Pond Dam	Dam		X	-	-	-
North Pond Dam	Dam	X	X	-	-	-
Rhiebeck Village Pump #2	Wastewater Pump	X	X	-	-	-

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:

- Crystal Lake (American Legion Park)
- Rain events lead to significant flooding due to limited stormwater drainage on the following roadways within the Village:
    - Manor Road
    - Cozine Avenue
    - Mulberry Street
    - Platt Avenue
    - Livingston Street
- During periods of heavy rain, the following roadways flood due to undersized culverts:
    - West Market Street
    - Oak Street
    - Garden Treet

9.29.5 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 Rhinebeck.

Table 9.29-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	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	Local	Village Board	Comprehensive Plan (1993)
Capital Improvements Plan	No			
Floodplain Management / Basin Plan	Yes	Local	Village Board	
Stormwater Management Plan	Yes	Local	Village Board	
Open Space Plan	No			
Stream Corridor Management Plan	Yes	Local	Village Board	
Watershed Management or Protection Plan	Yes	Local	Village Board	
Economic Development Plan	No			
Comprehensive Emergency Management Plan	No			
Emergency Response Plan	Yes	Local	Village Board	
Post-Disaster Recovery Plan	No			
Transportation Plan	No			

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Strategic Recovery Planning Report	No			
Other Plans:	No			
Regulatory Capability				
Building Code	Yes	State and Local	CEO	Chapter 39 – Building Construction and Fire Prevention (2007)
Zoning Ordinance	Yes	Local	ZEO	Chapter 120 – Zoning (2010)
Subdivision Ordinance	Yes	Local	ZEO	Chapter A126 – Subdivision Regulations (2010)
NFIP Flood Damage Prevention Ordinance	Yes	Local	Building Dept.	Chapter 59 – Flood Damage Prevention (2012)
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	Planning Board	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		Planning Board	
Stormwater Management Ordinance	Yes	Local	Planning Board	Chapter 91 – Sewers (1992)
Municipal Separate Storm Sewer System (MS4)	No			
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Planning Board	NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local	Planning Board	Chapter 49 – Environmental Quality Review (under review) Chapter 115 – Water (1997) Chapter 106 – Trees (2009) Article XIV 120.69 – Greenway Connections (2004) Chapter 120 – Best Management Practices Chapter A125 – Road Plans

Administrative and Technical Capability

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

Table 9.29-7. Administrative and Technical Capabilities

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

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Environmental Board/Commission	No	
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	
Planners or engineers with an understanding of natural hazards	No	
NFIP Floodplain Administrator	Yes	John Fenton, Zoning Enforcement Officer / 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	No	
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 Rhinebeck.

Table 9.29-8. Fiscal Capabilities

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

Community Classifications

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

Table 9.29-9. Community Classifications

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

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 Rhinebeck's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.29-10. Self-Assessment Capability for the Municipality

	Degree of Hazard Mitigation Capability

Area	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability	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)

John J. Fenton, Floodplain Administrator

Flood Vulnerability Summary

The Village of Rhinebeck does not maintain lists of properties that have been damaged by floods. The FPA does/did not make damage estimates during Sandy or other events.

Resources

The FPA is the sole person assuming the responsibility for the duties of the Village. The duties of the FPA includes permit review, inspections, and record keeping. The FPA does not feel adequately supported and is under trained to properly fulfill the duties and is requesting education and training.

Compliance History

The FPA is unaware of the Village's standing with the NFIP and does not know when the most recent compliance audit was conducted.

Regulatory

The Village has several ordinances that support floodplain management.

Community Rating System

The Village of Rhinebeck 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 SEQR and Federal NEPA requirements.

Regulatory and Enforcement (Ordinances)

Flood Damage Prevention Chapter 59: 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 120: 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.

Operational and Administration

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 Village has news and announcements on the home page of the website. The Site has the option to sign up for the email list to automatically be made aware of announcements. The website includes contact information for all emergency service personnel. The Planning Department is a member of the Dutchess County Planning Federation and attends trainings and researches best practices that other communities are implementing. The Town has planned to budget for training for personal including professional development geared towards health and safety.

9.29.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The Village of Rhineback has no prior mitigation strategy.

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Village of Rhinebeck has not identified any mitigation projects/activities that have been completed within the community.

Proposed Hazard Mitigation Initiatives for the Plan

The Village of Rhinebeck 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 9.29-11 summarizes the comprehensive-range of specific mitigation initiatives the Village of Rhinebeck 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 9.29-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan.

Table 9.29-11. 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
V. Rhinebeck-1 Sandy LOI	S. Parsonage St. Water Main Relocation	Existing	Severe Storm and Flooding	1, 2	Village	Medium	High	HMGP with local cost share	DOF	High	SIP	PP
V. Rhinebeck-2 Sandy LOI	Ferncliff Nursing Home Emergency Power Upgrade – purchase and install generator with two transfer switches	Existing	All	1, 2	Ferncliff Nursing Home and Village	Protect Life	High	HMGP with local cost share	Short Term	High	SIP	PP
V. Rhinebeck-3	Conduct a study to determine what actions need to be taken to prevent flooding in the Village due to limited stormwater drainage.	Existing	Flood	1, 2	Village	Medium	Medium	Grant funding with local cost share; Village budget	Short Term	Medium	LPR	PR
V. Rhinebeck-4	Conduct a study to determine what actions need to be taken to prevent flooding in the Village due to undersized culverts.	Existing	Flood	1, 2	Village	Medium	Medium	Grant funding with local cost share; Village budget	Short Term	Medium	LPR	PR
V. Rhinebeck-5	While updating the master/comprehensive plan, incorporate risk assessment and hazard mitigation principles into planning efforts.	N/A	All	All	Village	High	Low	Village Budget	Ongoing	High	LPR	PR

Notes:

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

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

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*

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 2015)*
SRL	*Severe Repetitive Loss Grant Program (discontinued 2015)*

Timeline:

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

NFIP *National Flood Insurance Program*
OEM *Office of Emergency Management*

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 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:

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 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 9.29-12. 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
V. Rhinebeck-1 Sandy LOI	S. Parsonage St. Water Main Relocation	1	1	1	1	1	0	1	0	0	1	1	0	1	0	9	High
V. Rhinebeck-2 Sandy LOI	Ferncliff Nursing Home Emergency Power Upgrade – purchase and install generator with two transfer switches	1	1	1	1	0	0	1	0	0	1	1	0	1	0	8	High
V. Rhinebeck-3	Conduct a study to determine what actions need to be taken to prevent flooding in the Village due to limited stormwater drainage.	1	1	1	0	0	0	1	1	0	1	1	1	1	0	8	Medium
V. Rhinebeck-4	Conduct a study to determine what actions need to be taken to prevent flooding in the Village due to undersized culverts.	1	1	1	0	0	0	1	1	0	1	1	1	1	0	8	Medium
V. Rhinebeck-5	While updating the master/comprehensive plan, incorporate risk assessment and hazard mitigation principles into planning efforts.	1	1	1	1	1	1	1	0	0	1	1	1	0	0	10	High

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

9.29.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

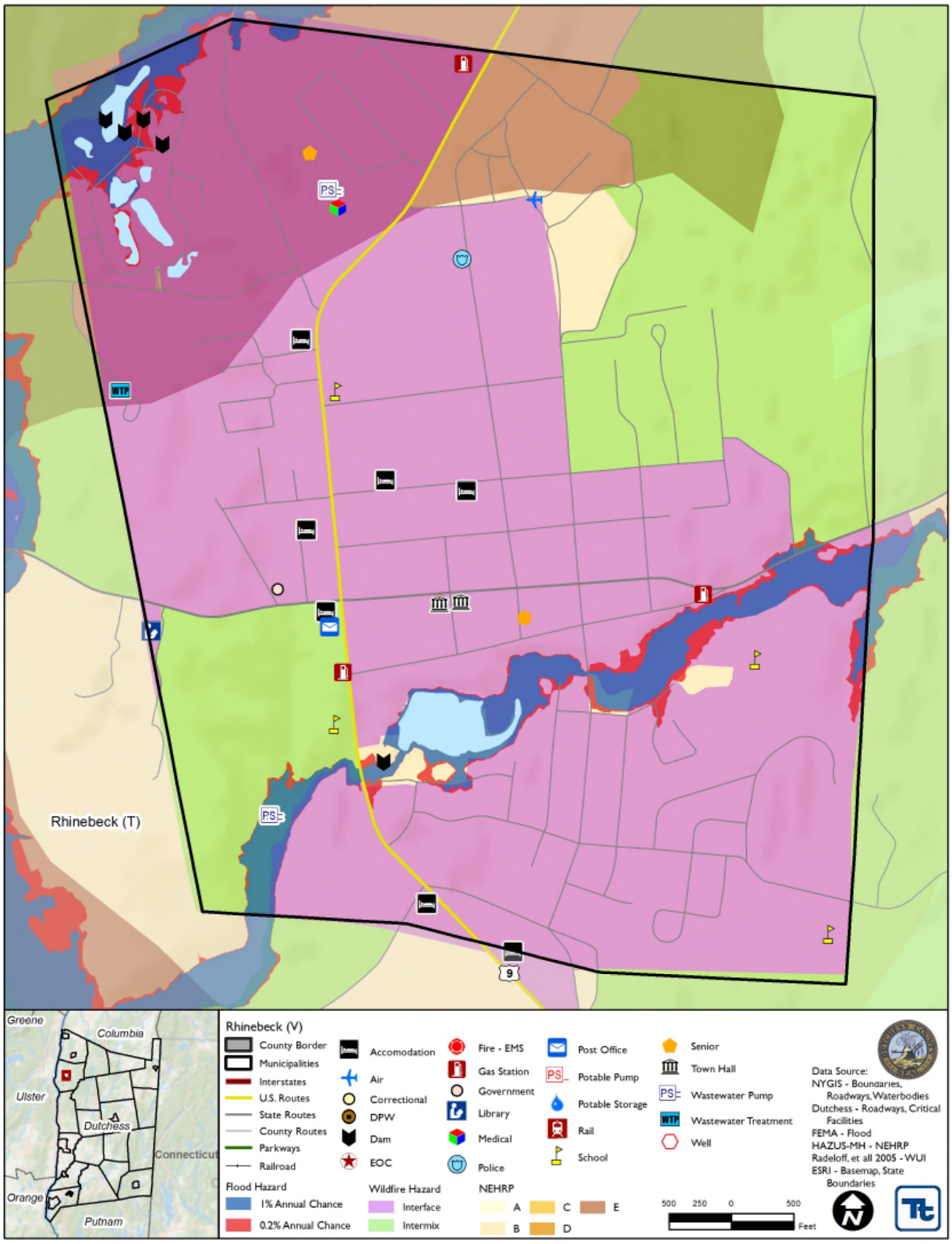
9.29.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Village of Rhinebeck 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 Rhinebeck has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.29.9 Additional Comments

None at this time.

Figure 9.29-1. Village of Rhinebeck Hazard Area Extent and Location Map 1



Name of Jurisdiction: Village of Rhinebeck
Action Number: V. Rhinebeck-1
Action Name: S. Parsonage St. Water Main Relocation

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	TBD
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Relocate the S. Parsonage Street water main
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	S. Parsonage St. Water Main Relocation
Mitigation Action/Project Type	SIP
Goals Met	1, 2
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Village
Local Planning Mechanism	Stormwater Management, Hazard Mitigation
Potential Funding Sources	HMGP with local cost share
Timeline for Completion	DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (see next page)**

Action Number: V. Rhinebeck-1

Action Name: S. Parsonage St. Water Main Relocation

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	1	Village will seek grant funding for this project
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	Severe Storm and Flooding
Timeline	0	Timeline depends on funding
Agency Champion	1	
Other Community Objectives	0	
Total	9	
Priority (High/Med/Low)	High	

Name of Jurisdiction: Village of Rhinebeck
Action Number: V. Rhinebeck-2
Action Name: Ferncliff Nursing Home Emergency Power Upgrade

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Loss of power to nursing home; impacts residents and staff
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Purchase and install generator with two transfer switches
	2. Purchase portable generators to use in the event of a power outage – not feasible for larger facilities
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install generator with two transfer switches at Ferncliff Nursing Home
Mitigation Action/Project Type	SIP
Goals Met	1, 2
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Ferncliff Nursing Home and Village
Local Planning Mechanism	Emergency Management, Hazard Mitigation
Potential Funding Sources	HMGP with local cost share
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (see next page)**

Action Number: V. Rhinebeck-2

Action Name: Ferncliff Nursing Home Emergency Power Upgrade

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Allow for continuity of operations in a critical facility (nursing home)
Property Protection	1	Provide continuous power during power events
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	1	Seek grant funding for this project
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	All that lead to power outages
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	High	