



9.30 BOROUGH OF NETCONG

This section presents the jurisdictional annex for the Borough of Netcong. The annex includes a general overview of the Borough of Netcong; an assessment of the Borough of Netcong's risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

9.30.1 Hazard Mitigation Planning Team

The following individuals are the Borough of Netcong's identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.30-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name / Title: Wayne Anthony, OEM Director Address: 23 Maple Ave., Netcong, NJ Phone Number: 862-432-0234 Email: wayneanthony@optonline.net	Name / Title: Chief James Blesson, Chief of Police/Deputy OEM Director Address: 23 Maple Ave., Netcong, NJ Phone Number: 201-400-0105 Email: chiefjblesson@netcong.org
NFIP Floodplain Administrator	
Name / Title: Ralph Blakeslee, Borough Administrator Address: 23 Maple Ave., Netcong, NJ Phone Number: 908-627-2367 Email: rblakeslee@netcong.org	

9.30.2 Jurisdiction Profile

The Borough Netcong is a residential community of approximately 0.9 square miles and located in northwestern Morris County. The Borough is bordered to the north by the Borough of Stanhope, to the southeast by the Township of Roxbury and to the south and west by the Township of Mount Olive. The principal waterway in the Borough is the Musconetcong River which originates in Lake Hopatcong.

According to the U.S. Census, the 2010 population for the Borough of Netcong was 3,232. The estimated 2017 population was 3,245, a 0.4% increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 3.4% of the population is 5 years of age or younger and 17.4% is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.30.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.30-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.30-1 and 9.20-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.



Table 9.30-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single Family	7	5	0	0	1
Multi-Family	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
None					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Crown Point	Residential	126 units	34 Bank St.		Land Use Board approved; broke ground in 2019
Pocketbook Factory Redevelopment Project	Residential	78 Apartments	2 Flanders Road Block 19, Lot 14	No known Hazard	In Progress – breaking ground in 2020

* Only location-specific hazard zones or vulnerabilities identified.

9.30.4 Capability Assessment

The Borough of Netcong performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community's adaptive capacity for the impacts of climate change.

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, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas that mitigation is currently integrated are summarized below. The Borough of Netcong identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to the Borough of Netcong and where hazard mitigation has been integrated.



Table 9.30-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Codes, Ordinances, & Requirements					
Building Code	Yes	State, Local	Yes	-	-
Comment: State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.); Chapter 140 of the borough code					
Zoning Code	Yes	Local	Yes	Yes	-
Comment: Chapter 194 (Land Development Procedures); adopted by the Borough Mayor and Council on 1/31/1979; the purpose of this chapter is to limit and restrict to specified districts and regulate therein buildings and structures according to their construction and the nature and the extent of their use and the nature and extent of the uses of land, including the regulation and restricting of the height, number of stories and sizes of buildings and other structures, the percentage of lot that may be occupied, the sizes of yards, courts and other open spaces, the density of population and the location and use and extent of use of buildings and structures and land for trade, industry, residence and other purposes					
Subdivisions	Yes	Local, Land-Use Board	Yes	Yes	-
Comment: Chapter 194 (Land Development Procedures); adopted by the Borough Mayor and Council on 1/31/1979. The code requires any developer applying for subdivision or resubdivision need to submit a sketch plat. The sketch plat has a list of requirements that is must include, including structures, wooded areas, topography, watercourses, soil erosion and sediment control, and utility and drainage information.					
Stormwater Management	Yes	State, Local, Land-Use Board	Yes	Yes	-
Comment: Borough Ord. 194-89 through 194-100. 4-13-2006 <ul style="list-style-type: none">Municipal Separate Storm Sewer System (MS4), Borough Ord. 238The Borough ensures that all new residential development and redevelopment projects are in compliance with the regulations as a condition of the Land Use Board approval process.					
Post-Disaster Recovery	No	-	-	-	-
Comment:					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	-	-
Comment: N.J.A.C. 13:45A-29.1					
Growth Management	No	-	-	-	-
Comment:					
Site Plan Review	Yes	Local	Yes	No	-
Comment: Chapter 194 (Land Development Procedures); adopted by the Borough Mayor and Council on 1/31/1979. The Borough requires site plan reviews and approvals prior to issuing a permit for any development except for detached one-family dwellings. The site plans have requirements that they must include, including the location and size of existing and proposed storm drainage facilities.					
Environmental Protection	No	-	-	-	-
Comment:					
Flood Damage Prevention	Yes	Local	Yes	Yes	-
Comment: Chapter 164 (Flood Damage Prevention Ordinance); adopted by the Mayor and Council on 7/13/1982. The purpose of this chapter is 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: Protect human life and health; Minimize expenditure of public money for costly flood control projects; Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; Minimize prolonged business interruptions; Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in areas of special flood hazard: Help maintain a stable tax base by providing for					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; Ensure that potential buyers are notified that property is in an area of special flood hazard; and Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. The Borough requires a development permit for any development or construction to occur in the special flood hazard area.					
Wellhead Protection	No	-	-	-	-
Comment:					
Emergency Management	No	-	-	-	-
Comment: Borough can declare a municipal state of emergency – part of the EOP; have the ability to bring in the additional services when needed (e.g. extra garbage pickup days, tree trimming, etc.)					
Climate Change	No	-	-	-	-
Comment:					
Disaster Recovery Ordinance	No	-	-	-	-
Comment:					
Disaster Reconstruction Ordinance	No	-	-	-	-
Comment:					
Other	No	-	-	-	-
Comment:					
Planning Documents					
Comprehensive / Master Plan	Yes	Local, Planning Board	Yes	-	-
Comment: Netcong Master Plan was first adopted in September 1978 and has been reexamined in 1988, 1998, and 2008. The plan 1978 includes elements on: existing development, population, neighborhood analysis, environmental conditions, traffic plan, community facilities plan, financial considerations, and land use plan. The January 2008 Master Plan Reexamination Report includes goals related to open space, zoning, environmental (including flooding and stormwater), and preserving the character of the Borough.					
Capital Improvement Plan	Yes	Local	No	-	-
Comment: This is part of the annual budget and updated each year. It includes line items for snow removal, maintenance, and capital improvement projects.					
Disaster Debris Management Plan	No	-	No	-	-
Comment:					
Floodplain or Watershed Plan	No	-	No	-	-
Comment:					
Stormwater Management Plan	Yes	Local, Borough Engineer	Yes	-	-
Comment: Netcong Stormwater Management Plan, 3/2005; the Planning Board has adopted the plan and is an amendment to the Borough’s master plan.					
Stormwater Pollution Prevention Plan	Yes	Local	Yes	-	-
Comment: Netcong Borough Stormwater Pollution Prevention Plan; last updated in December 2017 by the Borough Engineer. The plan outlines how the Borough reduces stormwater pollution, including their maintenance schedule, how they implement the ordinances, training, and education and outreach.					
Urban Water Management Plan	No	-	-	-	-
Comment:					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Habitat Conservation Plan	No	-	-	-	-
<i>Comment:</i>					
Economic Development Plan	No	-	-	-	-
<i>Comment:</i>					
Shoreline Management Plan	No	-	-	-	-
<i>Comment:</i>					
Community Wildfire Protection Plan	No	-	-	-	-
<i>Comment:</i>					
Community Forest Management Plan	No				
<i>Comment:</i>					
Transportation Plan	Yes	Local, Netcong School	No	-	-
<i>Comment:</i> Netcong School Travel Plan, 12/2006					
Agriculture Plan	No	-	-	-	-
<i>Comment:</i>					
Climate Action Plan	No	-	-	-	-
<i>Comment:</i>					
Tourism Plan	No	-	-	-	-
<i>Comment:</i>					
Business Development Plan	No	-	-	-	-
<i>Comment:</i>					
Other	No	-	-	-	-
<i>Comment:</i>					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local, OEM	Yes	-	-
<i>Comment:</i> Municipal Emergency Operations Plan					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	-	-	-	-
<i>Comment:</i>					
Continuity of Operations Plan	Yes	Local	No	-	-
<i>Comment:</i> Part of the EOP in the EOC annex; prior to any event, the Borough meets to identify what needs to be done to help reduce storm impacts					
Public Health Plan	Yes	Local	No	-	-
<i>Comment:</i> Part of the EOP but governed by the Mt. Olive Health Department					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Other	No	-	-	-	-
Comment:					

Table 9.30-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes and No. Borough Zoning Department but uses Byram Construction Department for building permits
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes. Through the redevelopment plan

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Borough of Netcong.

Table 9.30-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board consists of volunteer residents appointed by the Mayor & Council who are responsible for preparing the Borough Master Plan in compliance with provisions of the New Jersey Municipal Land Use Law (MLUL) and who are responsible for reviewing zoning ordinances referring to them by the Mayor & Council.
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	No	-
Economic Development Commission / Committee	Yes	Borough Council
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Reverse 911 (Swift911) through the County
Maintenance program to reduce risk	Yes	The Borough conducts storm drain cleaning and tree trimming to help reduce the impacts during storm events. Catch basins are inspected twice a year to maintain function and



Staff/Personnel Resource	Available?	Department/Agency/Position
		efficiency. If there is sediment, trash or debris in the basins, the Borough will clean as needed.
Mutual aid agreements	Yes	Surrounding communities and Morris County
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Borough Engineer, Borough Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Borough Engineer, Borough Construction Official
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer
Staff with training in benefit/cost analysis	Yes	Borough Administrator
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	Yes	Borough Engineer
Personnel skilled or trained in GIS applications	Yes	Borough Engineer
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Borough Engineer, Borough Administrator
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

The table below summarizes financial resources available to the Borough of Netcong.

Table 9.30-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	No

EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to the Borough of Netcong.



Table 9.30-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes – Borough Administrator
Do you have personnel skilled or trained in website development?	Yes – Borough Administrator
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes - The Borough provides news and event information on the homepage of their website (http://netcong.org/).
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	The Borough has a public outreach program that informs its citizens on hazards. Additionally, the Borough utilizes Swift Reach which allows the community to provide important information (alerts, advisories, community information, traffic, etc.) to the residents of the Borough.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	Yes – Borough Calendar, tax bill, Facebook
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Yes – Swift Reach

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the Borough of Netcong.

Table 9.30-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	
Public Protection (Fire ISO Protection Class)	Yes	5	
Storm Ready Certification	No		
Firewise Community Classification	No		
Sustainable Jersey	No	Registered	3/6/2009

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

- Does the municipality have access to resources to determine the possible impacts of climate change upon the municipality? Yes/No
- Is the administrative supportive of integrating climate change in policies or actions? Yes/No
- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the municipality? Yes/No

**Table 9.30-9. Adaptive Capacity** *Please review these ratings and adjust as necessary*

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Dam Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Medium
Extreme Temperature	Medium
Flood	Medium
Geological Hazards	Medium
Harmful Algal Bloom	Medium
Hazardous Substances	Medium
Infestation	Medium
Severe Weather	Medium
Severe Winter Weather	Medium
Wildfire	Medium

Notes:

High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;

Low = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

NATIONAL FLOOD INSURANCE PROGRAM

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

Table 9.30-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Administration and Engineering
Who is your floodplain administrator? (name, department/position)	Administration and Engineering
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	Chapter 164; adopted 7/13/1982
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets the minimum; however, it does meet the design flood elevation required by NJDEP.
When was the most recent Community Assistance Visit or Community Assistance Contact?	According to information provided by FEMA, dated March 18, 2020, a CAV or CAC has not been conducted for the Borough.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No – the Borough is not interested in joining CRS at the time of the plan update



Criterion	Response
How many flood insurance policies are in force in your jurisdiction?*	1 Policy in force. \$250,000 Insurance In-Force. \$1,524 Premium In-Force.
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	
How many total loss claims have been filed in your jurisdiction?*	3 Claims. 0 claims still open, 0 claims closed without payment. \$1,017,297 claim amount.
<ul style="list-style-type: none"> How many claims are still open or were closed without payment? What were the total payments for losses? 	
Do you maintain a list of properties that have been damaged by flooding?	Yes - McMullan and Route 183; Allen and Route 183 are the floodprone areas in the Borough - two different water sources
Do you maintain a list of property owners interested in flood mitigation?	No – there is no interest within the Borough at the time of the plan update

*According to FEMA statistics as of July 2019

ADDITIONAL AREAS OF EXISTING INTEGRATION

- **Planning Board** reviews and acts on the following:
 - Applications for subdivision approval
 - Applications for site plan approval
 - Applications for variances
 - Revisions to the Borough Zoning Ordinance
- **Permits** - Construction permits are required for most building projects and improvements. Depending on the project, a Zoning Permit may be required as well as a Building Permit.
 - Zoning Permits are required for any expansion to a house footprint (deck, porch, room addition) or the addition of structures (pool, fence, shed, patio).
 - Building permits are required for demolition, new work (construction, plumbing and electrical), and most replacement or renovation projects. Byram Township Building Department is responsible for issuing building permits.
- **Stormwater Management** – the Borough has a website dedicated to stormwater management in the municipality (http://netcong.org/storm_water/index.html). It provides information for residents on pollution, stormwater, and what they can do to protect drinking water. The Borough Public Works Department monitors roads in the Borough throughout the year to note any conditions that need addressing, including erosion control problems. Any problems are reported to the Public Works Director and repairs are made as needed.

9.30.5 Hazard Event History Specific to the Jurisdiction

Morris County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.4 (Hazard Profiles) and includes a chronology of events that affected Morris County and its jurisdictions. The Borough of Netcong's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Morris County. Table 9.30-11 provides details regarding municipal-specific loss and damages the Borough experienced during hazard events. Information provided in the table below is based on reference material or local sources.



Table 9.30-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
January 22-24, 2016	Severe Winter Storm and Snowstorm (DR-4264)	Yes		Department overtime, vehicle costs, and supplies – applied to FEMA for reimbursement
March 6-7, 2018	Severe Winter Storm and Snow Storm (DR-4368)	Yes		Department overtime, vehicle costs, and supplies – applied to FEMA for reimbursement
March 21, 2018	Winter Storm	No	Precipitation began as a wet, heavy snow during the evening hours on March 20th. After a lull during the overnight hours, a drier snow began falling, heavy at times, during the afternoon and evening hours on March 21st. Snowfall totals were lower in the eastern portions of the county where mixing took place. Some snowfall reports include: 12.0 inches in Netcong, Green Pond, and Mine Hill Township, 11.2 inches in Jefferson Township, 11.0 inches in Marcella, 10.5 inches in both Rockaway and Mine Hill Township, 10.0 inches in Succasunna, 9.5 inches in Butler, 9.3 inches in Denville, 9.2 inches in both Budd Lake and Washington Township, 8.8 inches in both Mount Arlington and Randolph Township, 8.4 inches in Morristown, 8.2 inches at Charlottesburg Reservoir, 8.0 inches in Dover, 7.5 inches in Parsippany, 7.0 inches at Boonton Reservoir, 7.0 inches in Millington, 6.5 inches in Pine Brook, 4.0 inches in Beach Glen, and 3.7 inches in Pleasantville.	Department overtime, vehicle costs, and supplies – applied to FEMA for reimbursement

9.30.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Table 9.30-12 summarizes the Borough of Netcong risk assessment results and data used to determine the hazard ranking. Borough of Netcong

In an attempt to summarize the confidence level regarding the input utilized to populate the hazard ranking, a gradient of certainty was developed. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and increased understanding of the data utilized to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.30-12. Summary of Risk Assessment Results

Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Dam Failure	Partial or complete failure of a dam There are 2 dams in the Borough, according to NJDEP.	Population impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		The number of building impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		Economic impacts include dam/building/infrastructure repairs; debris removal/disposal; utility impacts.		Low
Disease Outbreak	Disease Outbreaks which include: Mosquito-Borne Diseases, Tick-Borne Diseases, Campylobacteriosis, Influenza, Mumps, Ebola	Population impacted is dependent on the disease and severity of the outbreak; in some cases immuno-compromised persons are more vulnerable.		Structural impacts due to disease outbreak would be limited.		Economic losses can include County financial impacts to monitor/address outbreaks; lost wages or commercial interruptions; depends on the severity and type of disease outbreak. .		Low
Drought	Prolonged drought event - The County is serviced by water supplies who primarily get water from groundwater sources; some surface water sources.	Entire population exposed. Population on surface water supplies may be impacted first; water restrictions/contamination; increased wildfire risk.		Droughts are not expected to cause direct damage to buildings.		Losses include aesthetic, landscape/nursery/agricultural industry impacts.		Low
Earthquake	100, 500-, 2,500-Year Mean Return Period (MRP) Events evaluated NEHRP Soils D&E (soft soils that amplify ground shaking are present in the County)	NEHRP D&E:	0	NEHRP D&E:	2	100-year Loss:	\$0	High
		Liquefaction Class 4:	0	Liquefaction Class 4:	0	500-year Loss:	\$389,106	
						2,500-year Loss:	\$6,279,796	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	565	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.		Low
		Population Below Poverty Level:	373					



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Flood	100- and 500-Year Mean Return Period Event	100-year	0	100-year	1	100-year Loss:	\$182,743	High
		500-year	0	500-year	1			
Geological	High Landslide Susceptibility Areas and Areas developed over carbonate rock	Class A:	0	Class A:	0	Class A:	0	Moderate
		Class B:	0	Class B:	0	Class B:	\$0	
		Carbonate Bedrock:	0	Carbonate Bedrock:	0	Carbonate Bedrock:	\$0	
Harmful Algal Bloom	Any body of water or area adjacent that is susceptible to harmful algal bloom.	Population in contact (e.g., swimming) or drinking water from surface water impacted can result in a range of health effects		General building stock impacts due to harmful algal bloom are not anticipated. Critical facilities (i.e., water treatment plants) could lead to plant closures.		Economic impacts range from recreational closure of impacted waterbodies; cost to sample/monitor/remediate.		Low
Hazardous Substance	Release of a hazardous substance from a fixed site.	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.		The degree of damages to a building depends on the scale of the incident.		The degree of damages depends on the scale of the incident.		Low
Infestation	Infestation including: Insects [e.g. Gypsy Moth, Mosquitoes, Spotted Lanternfly, Emerald Ash Borer], White-Tailed Deer, Rodents	Population impacted will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Physical impacts will be limited to indirect impacts from invasive species which affect crops and vegetation.		Economic impact will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Low
Severe Weather	Severe Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		Annualized Loss:	\$7,604	High
						100 -Year Loss:	\$324,050	
						500-year Loss:	\$1,998,030	
Severe Winter Weather	Severe Winter Weather Event	All residents/commuters/visitors are exposed; socially-vulnerable populations may be at increased risk.		All buildings are exposed; the degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads/infrastructure can impact operating budgets.		Low
Wildfire	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	3	Wildfire:	1	Wildfire:	\$478,031	Moderate



REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Netcong.

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

CRITICAL FACILITIES

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain.

Table 9.30-13. Potential Flood Losses to Critical Facilities and Lifelines

Name	Type	Exposure		Status of Mitigation
		1% Event	0.2% Event	
No critical facilities located in the floodplain identified at this time.				

ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

- Flooding in the Borough of Netcong is caused primarily by the Musconetcong River. More extensive flooding in the Borough occurs mostly in the late summer and early fall (FEMA FIS 2010).
- The corner of Allen Street and Route 183 section of the Borough floods during heavy rain events (72-hour events). The garage located at this intersection is below grade. Allen Street is a county road and Route 183 is a state road. If these roads are not maintained by the county or state, the area will flood. Because they Borough does not have jurisdiction over these roadways, they cannot implement a maintenance program to properly maintain the storm sewers.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Borough of Netcong 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 adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Borough of Netcong has significant exposure. Refer to Figures 9.30-1 and 9.30-2.

HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Morris County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community factoring in their capabilities to withstand impacts and bounce back after the event. The table below summarizes the hazard rankings of potential natural hazards for the



Borough of Netcong. The Borough of Netcong has reviewed the Morris County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the community.

Table 9.30-14. Borough of Netcong Hazard Ranking Input

Dam Failure	Disease Outbreak	Drought	Earthquake	Extreme Temperature	Flood
Medium	High	Medium	Medium	Medium	Medium

Geological Hazards	Harmful Algal Bloom	Hazardous Substances	Infestation	Severe Weather	Severe Winter Weather	Wildfire
Low	Low	High	Medium	High	High	Medium

9.30.7 Mitigation Strategy and Prioritization

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

PAST MITIGATION INITIATIVE STATUS

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under 'Capability Assessment' presented previously in this annex.

Table 9.30-15. Status of Previous HMP Mitigation Actions

2015 Action Number Action Description		Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
				Check if Yes	Enter 2020 HMP Action #
Netcong - 1	Flood proofing Municipal Building/ Police Department (data storage) on 23 Maple Avenue.	Netcong Borough Engineer	In Progress	Yes	2020-NETCONG-002
Netcong - 2	Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	County OEM	Ongoing Capability – through Borough OEM	-	-
Netcong - 3	When updating municipal ordinances, make hazard mitigation a priority.	Borough Engineer	Ongoing Capability	-	-
Netcong - 4	Continue incorporating plans and practices to protect natural resources within the Borough.	Borough Engineer	Ongoing Capability	-	-
Netcong - 5	Continue to incorporate hazard mitigation actions into daily operations of the Borough and make all projects a goal of the Borough.	Borough Engineer	Ongoing Capability	-	-
Netcong - 6	Maintain practices and procedures that are currently in place to protect the Borough's infrastructure.	Borough Engineer	Ongoing Capability	-	-



PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Borough of Netcong participated in a risk assessment workshop in November 2019 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. The Borough of Netcong participated in a mitigation action workshop in March 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and 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). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.30-16 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Netcong would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can 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 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the jurisdiction, were then used to prioritize the mitigation initiatives as 'High', 'Medium', or 'Low.' Table 9.30-17 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.30-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-NETCONG-001	Updated Borough's Flood Damage Prevention Ordinance	<p>Problem: The Borough's current flood damage prevention ordinance does not currently meet the NJDEP flood hazard area design requirement of at minimum of one foot above the base flood elevation.</p> <p>Solution: Update the Borough's flood damage prevention ordinance to include the requirement of the bottom of the first floor being elevated one foot above base flood elevation for development in the floodplain.</p>	New and Existing	Flood	3, 4	Borough Administration	Borough Budget	Increase flood protection of structures in floodplain	\$10,000	1 year	High	LPR	PR
2020-NETCONG-002	Floodproof Municipal Building and Police Department	<p>Problem: The Borough's municipal building and police department are located at 23 Maple Avenue. While the building is not located in a floodplain, it is susceptible to flooding as a result of runoff from Interstate 80 and Netcong Circle. The Borough does not have jurisdiction over Interstate 80 or the Netcong Circle.</p> <p>Solution: Since the Borough does not have jurisdiction over the roadways causing flooding, the Borough will conduct a feasibility study to determine mitigation measures to floodproof the building. Once identified, the Borough will implement the floodproofing measures.</p>	Existing	Severe Weather, Flood	3, 4	Borough Engineer and Administrator	FEMA PDM and HMGP, Borough Budget	Protect building and equipment, continuity of operations	\$25,000	Within 3 years	High	LPR, SIP	PR, PP
2020-NETCONG-003	Enhance Pandemic Response Operations	<p>Problem: With the current pandemic situations, the Borough needs to enhance their current response program.</p> <p>Solution: The Borough will enhance their pandemic</p>	N/A	Disease Outbreak	All	Borough OEM, Borough Administration	Borough Budget	Increases response capabilities; provides proper equipment	~\$20,000	Within 2 years	High	EAP, LPR	PR, ES



Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
		response operations to address the current pandemic and any potential disease outbreaks. This will include enhancing their procedures (day-to-day and emergency operations); purchasing disinfectants; purchasing equipment to allow for social distancing; purchase several thermal scanners for use by municipal staff; purchase portable UV disinfectant system for shared areas; and purchase personal protective equipment for staff (e.g. masks, gloves, face shields).											

Notes:

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Mitigation Category:

- *Local Plans and Regulations (LPR)* – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- *Structure and Infrastructure Project (SIP)* - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- *Natural Systems Protection (NSP)* – These are actions that minimize damage and losses and 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. 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 preserve or restore the functions of natural systems. 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. 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 9.30-17. Summary of Action Evaluation and Action Priority

Initiative Number	Mitigation Initiative Name	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
2020-NETCONG-001	Updated Borough's Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2020-NETCONG-002	Floodproof Municipal Building and Police Department	1	1	1	1	1	0	0	0	0	1	1	1	1	1	10	High
2020-NETCONG-003	Enhance Pandemic Response Operations	1	1	1	1	1	1	0	0	1	1	0	1	1	0	10	High

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.30-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure								
Disease Outbreak	-003		-003		-003			
Drought								
Earthquake								
Extreme Temperature								
Flood	-001, -002	-002				-002		
Geological Hazards								
Harmful Algal Bloom								
Hazardous Substances								
Infestation								
Severe Weather	-002	-002				-002		
Severe Winter Weather								
Wildfire								

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

RED = high ranked hazard

ORANGE = medium ranked hazard

YELLOW = low ranked hazard

9.30.8 Staff and Local Stakeholder Involvement in Annex Development

The Borough of Netcong followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The following table summarizes who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.30-19. Contributors to the Annex

Entity	Title	Method of Participation
Wayne Anthony	OEM Director	Attended meetings, provide input on mitigation strategy, updating municipal annex, point of contact for Borough
Ralph Blakeslee	Borough Administrator	Attended meetings, provide input on mitigation strategy, updating municipal annex



Figure 9.30-1. Borough of Netcong Hazard Area Extent and Location Map 1

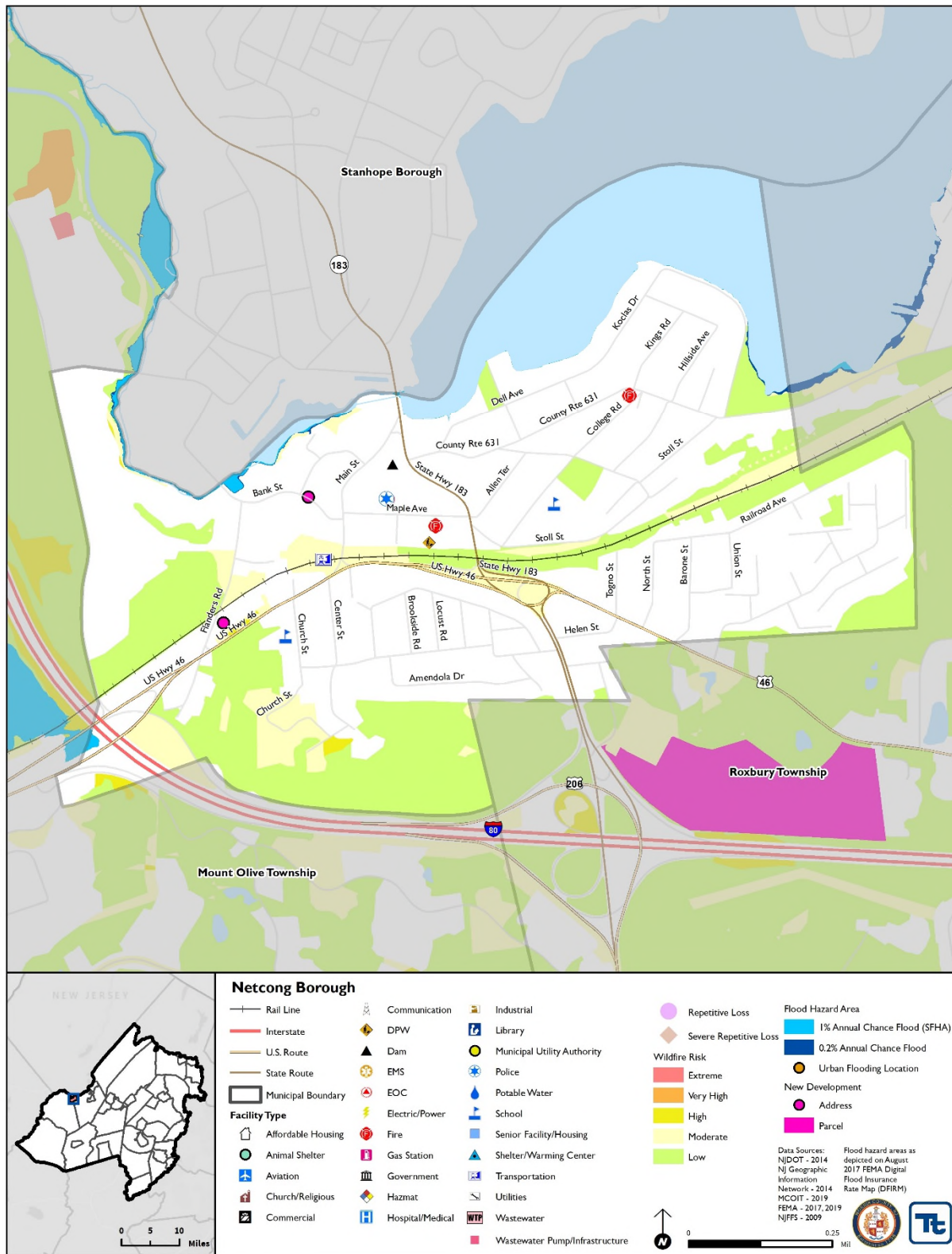
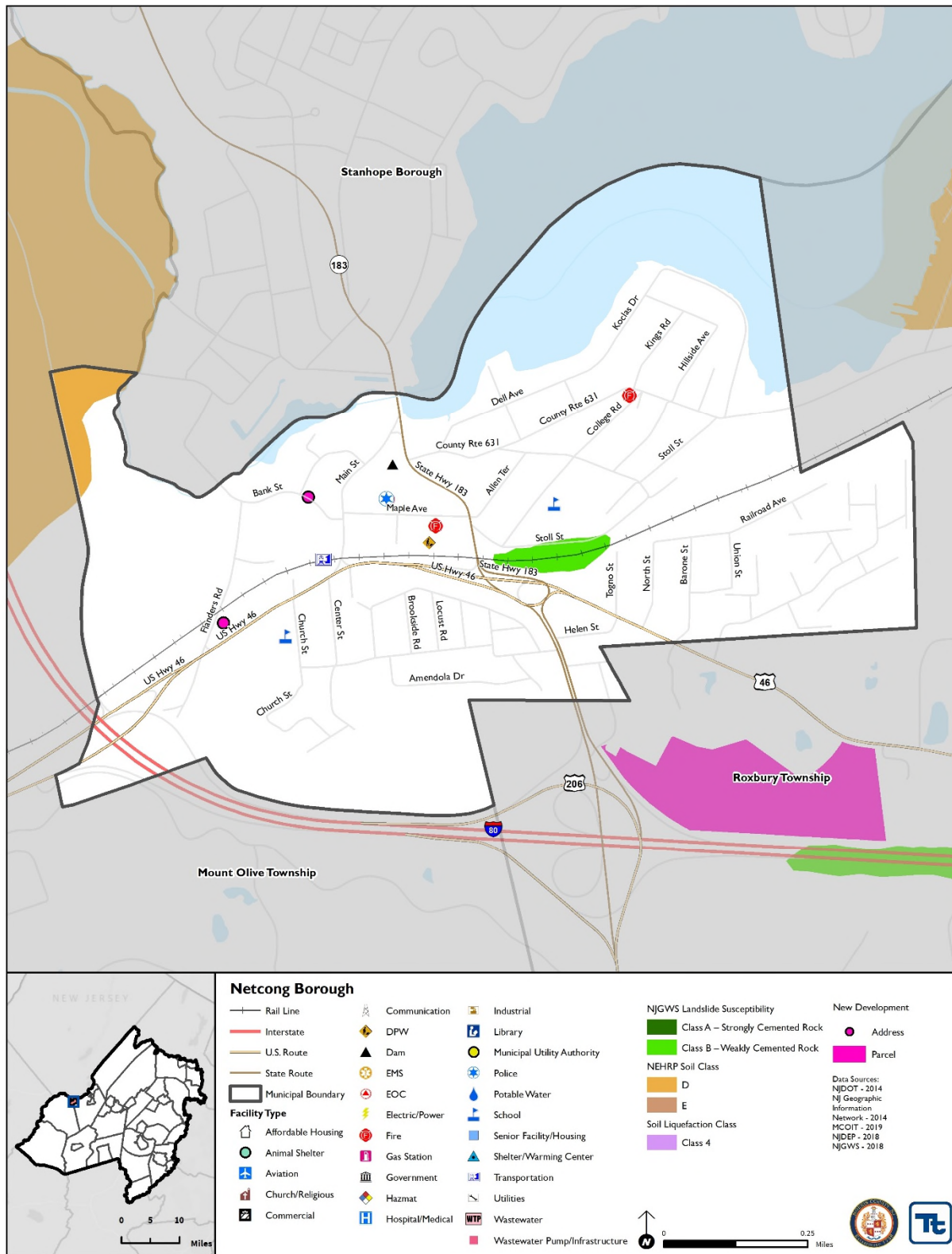




Figure 9.30-2. Borough of Netcong Hazard Area Extent and Location Map 2





Action Worksheet			
Project Name:	Floodproof Municipal Building and Police Department		
Project Number:	2020-NETCONG-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Flood		
Description of the Problem:	The Borough's municipal building and police department are located at 23 Maple Avenue. While the building is not located in a floodplain, it is susceptible to flooding as a result of runoff from Interstate 80 and Netcong Circle. The Borough does not have jurisdiction over Interstate 80 or the Netcong Circle.		
Action or Project Intended for Implementation			
Description of the Solution:	Since the Borough does not have jurisdiction over the roadways causing flooding, the Borough will conduct a feasibility study to determine mitigation measures to floodproof the building. Once identified, the Borough will implement the floodproofing measures.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	25- year	Estimated Benefits (losses avoided):	Protect building and equipment, continuity of operations
Useful Life:	50 years	Goals Met:	3, 4
Estimated Cost:	\$25,000	Mitigation Action Type:	LPR, SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 3 years
Estimated Time Required for Project Implementation:	Within 3 years	Potential Funding Sources:	FEMA PDM and HMGP, Borough Budget
Responsible Organization:	Borough Engineer and Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate structure	\$275,000+	Costly; building cannot be elevated
	Relocate structure	\$1 million+	Costly; no available land to relocate/reconstruct building
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Floodproof Municipal Building and Police Department	
Project Number:	2020-NETCONG-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect Borough offices and police department from flood damage; allows continuity of operations
Cost-Effectiveness	1	Benefits outweigh the costs of project
Technical	1	
Political	1	
Legal	0	
Fiscal	0	Need grant funding to complete project
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	