



9.7 TOWN OF DOVER

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

9.7.1 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
Linda S. French, Town Supervisor 126 East Duncan Hill Road, Dover Plains, NY 12522 845-832-6111 supervisor@townofdoverny.us	Richard Yeno, Deputy Town Supervisor 126 East Duncan Hill Road, Dover Plains, NY 12522 845-832-6111 RYeno@townofdoverny.us

9.7.2 Municipal Profile

The Town of Dover is located in the south-eastern quadrant of Dutchess County, NY. It borders the Towns of Amenia and Washington to the north, the Towns of Union Vale and Beekman to the west, the Town of Pawling to the south, and the State of Connecticut to the east. The Town contains several hamlets, including Dover Plains, South Dover, and Wingdale. The Town contains two major transportation corridors, Route 22 and Route 343. It also offers residents the option to travel by commuter rail as the Metro-North Railroad's Harlem Line has two rail stations in the Town. The Town's more vulnerable structures and critical facilities will be discussed in further detail throughout the Hazard Mitigation Plan and this annex.

The Town has a total area of 56.34 square miles, of which 55.19 square miles is land and 1.15 square miles is water. Ellis Pond and Lake Weil are two locally recognized small lakes in the southeast parts of Town, and the Town's FIS has identified the following proximate waterways as potential sources of vulnerability for flooding – Swamp River Reach 1, Wells Brook, and the Tenmile River. Parts of the Town include steep slopes, such those along West Mountain beyond Route 22.

According to the 2010 U.S. Census, the population of the Town of Dover was 8,699.

Growth/Development Trends

As there was no major commercial, residential, or infrastructure developments between 2010 and 2015, the following table summarizes 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 9.7.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.7-1. 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					
None					
Known or Anticipated Development in the Next Five (5) Years					
Cricket Valley Energy	Commercial	Natural gas-fired electricity plant	Rt. 22 Dover Plains		Permitting process
Olivet Center	Residential/Commercial	Unknown	Rt. 22 Wingdale		Site plan process

* Only location-specific hazard zones or vulnerabilities identified.



9.7.3 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 9.7-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
December 26-27, 2010	Severe Winter Storm and Snowstorm / Nor'Easter	DR-1957	Yes	The Town Highway Department used more than 10 personnel for more than 200 regular and 99.5 overtime hours to conduct emergency clearance of roads due to excess snow to provide emergency access. Personnel placed sand and salt on 66.5 miles of Town roads, using 30 pieces of equipment for a total of 906 hours. Material expenses for salt and sand, and the provision of food for HD employees were \$9,212.03 on 12/26/10. Total incident costs reached \$35,612.67, and the town received \$31,831.03 in Public Assistance.
March 11-13, 2011	Heavy Rainfall, Snowmelt, Ice Jams	N/A	N/A	A local state of emergency was declared in the Town of Dover on March 7, 2011 due to rainfall and warming conditions resulting in heavy, widespread flooding, mudslides, road blockages, and other conditions associated therewith. Road closures included Leather Hill Road, J'Mae Circle, Ten Mile River Road, Old Forge Road, and Weils Road. Motorists were advised to use special caution on another 11 roads.
August 26 – September 5, 2011	Hurricane Irene	DR-4020	Yes	A local state of emergency was declared on August 27 th due to rainfall, flooding, and high winds from Hurricane Irene. Total rainfall for the area was 7.15" between 8/27 and 8/28. The storm caused widespread damage to local infrastructure, including roadway or culvert damage on Brasher Road, Holsapple Road, Cooperstown Road, McCourt Road at Galentes, Jaime Circle, and Semt Road. Bridges on Ridge Road, Corbin Road, Weils Road, and Duell Hollow Road were damaged. Fallen trees caused downed power and utility lines on Cart Road, Ridge Road, and Duell Hollow Road. 443 residents experienced power outages – 212 of those outages were reported from Holsapple Road. The town conducted debris removal after the event, and families worked with the Red Cross to file FEMA Individual Assistance claims. The town received \$162,184.31 in Public Assistance.
October 27 – November 8, 2012	Hurricane Sandy	EM-3351	Yes	High winds from Hurricane Sandy led to road closures throughout the Town of Dover. At least 10 roads were blocked off due to downed trees or wires, including Benson Hill Road, Dover Furnace Road south of Ridge Road, Duell Hollow Road, Old Pawling Road, Northrup Road, Ridge Road, and Sherman Hill Road. NYSEG crews worked in the Town of the 31 st to clear trees and wires from County and Town roads to make roads passable, before beginning to restore power to affected customers. A state of emergency was declared on October 28 th , and a



Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
				local emergency order in the Town of Dover on the 31 st ordered all pedestrians off roads by 7:30pm, and all vehicles off roads by 8:00pm.

9.7.4 Hazard Vulnerabilities and Ranking

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

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Town of Dover.

Table 9.7-3. 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: \$1,966,069.00 500-year MRP: 15685142 Annualized: \$182,167.00	Frequent	48	High
Drought	Damage estimate not available	Frequent	42	High
Earthquake	100-Year GBS: \$228,154 500-Year GBS: \$4,174,329 2,500-Year GBS: \$39,020,695	Occasional	32	High
Extreme Temperature	Damage estimate not available	Frequent	21	Medium
Flood	1% Annual Chance: \$173,295,286	Frequent	36	High
Severe Storm	100-Year MRP: \$1,966,069 500-year MRP: \$15,685,142 Annualized: \$182,167	Frequent	48	High
Winter Storm	1% GBS: \$16,776,030 5% GBS: \$83,880,149	Frequent	51	High
Wildfire	Estimated Value in the WUI: \$2,313,019,395	Frequent	48	High

Notes:

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

- The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- 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
- 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 Town of Dover.





Table 9.7-4. 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)
Town of Dover	51	35	\$403,441.95	5	1	34

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 9.7-5. 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⁾
Crystal House Manor	Senior		X	-	-	-
Dover Plains Post Office	Post Office		X	-	-	-
Harlem Valley Pump	Wastewater Pump	X	X	-	-	-
Harlem Valley-Wingdale Rail Station	Rail	X	X	-	-	-
NDP St. 3	Fire		X	-	-	-
Regan's Mill Wastewater Treatment Plant	Wastewater Treatment Facility	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:

- Repeat flooding and washouts on the following Town roads:
 - J'Mae (Jaime) Circle
 - Weils Road
- Repeat occurrences of downed trees and power lines on Ridge Road and Duell Hollow Road.



9.7.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

Planning and Regulatory Capability

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

Table 9.7-6. 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, pending update. Adopted last in 1999	Local	Planning	Currently working on an update. Original plan does not reference HMP.
Capital Improvements Plan	No			
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	No			Town has a waiver at this time.
Open Space Plan	No			
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	No			
Comprehensive Emergency Management Plan	Yes			This plan is not comprehensive, and does not reference the HMP.
Emergency Response Plan	Yes			
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:				
Regulatory Capability				
Building Code	Yes	State and Local		Chapter 47 (Town)
Zoning Ordinance	Yes	Town		Chapter 145
Subdivision Ordinance	Yes	Town		Chapter 125
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local		Does not exceed minimum standards.
NFIP: Cumulative Substantial	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.)
Damages				
NFIP: Freeboard	Yes	State, Local		State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types.
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes			
Stormwater Management Ordinance	No			
Municipal Separate Storm Sewer System (MS4)	No			
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 Town of Dover.

Table 9.7-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	GIS capabilities and regularly trained. Also have zoning administrator. The Planning Board and Zoning Board of Appeals focus on compliance with Town and State codes/ordinances
Mitigation Planning Committee	No	There was previously a Northern and Eastern Dutchess County AHMP group (when 9 communities created a regional HMP)
Environmental Board/Commission	Yes	Called the Conservation Advisory Council
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Fire Company has with neighboring towns
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	No full-time Town or Contracted Planner
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Stormwater management functions are performed by the Planning board and Zoning Administrator
Planners or engineers with an understanding of natural hazards	Yes	Code Enforcement Officer, Building Inspector, Zoning Administrator
NFIP Floodplain Administrator	Yes	Building Inspector



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Surveyor(s)	No	
Personnel skilled or trained in GIS and/or HAZUS-MH applications	Yes	Principal IT Clerk is trained in GIS
Scientist familiar with natural hazards	No	
Emergency Manager	No	
Grant Writer(s)	No	Have prepared mitigation grants, but have not been awarded funding.
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	No	

Fiscal Capability

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

Table 9.7-8. Fiscal Capabilities

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

Community Classifications

The table below summarizes classifications for community program available to the Town of Dover.

Table 9.7-9. 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)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	No		
Storm Ready	No	-	-



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
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)	Yes	PPT synopsis of 2010 plan and education on Town of Dover website under All Hazard Mitigation Plan (www.townofdoverny.us)	Continued public education is needed
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/>

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Donn Andersen, Building Inspector

Flood Vulnerability Summary

The Town of Dover does not maintain an inventory of properties that have been flood damaged, and therefore has no record of the number of structures damaged, or substantial damage estimates for any structures affected during Floyd, Irene, Sandy, or other events. The Town is not aware of any property owners interested in mitigation activities.



Resources

The Floodplain Administrator is the sole person assuming the responsibilities of floodplain administration. Donn Andersen, Building Inspector, provides all of the NFIP administration services and functions, including permit review, inspections, damage assessments, record-keeping, GOS, education, and outreach. There is currently no education or outreach being offered to the community specifically regarding flood hazards/risk or flood risk reduction through NFIP insurance or mitigation.

The floodplain administrator does not report any barriers to running an effective floodplain management program in his community. However, at this time, he does not feel adequately supported and trained to fulfill his responsibilities as the municipal floodplain manager. The floodplain administrator expressed interest in attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Compliance History

Since 1978, 35 claims have been paid totaling \$403,441. The floodplain administrator is unaware of any outstanding NFIP compliance issues in the community, and does not know when the most recent Community Assistance Visit (CAV) was completed.

Regulatory

The Town's Flood Damage Prevention Ordinance (FDPO) was last reviewed and updated in April 2012 and is found in Chapter 81 of the local code. Floodplain management regulations and ordinances meet the FEMA and New York State minimum requirements, and does not exceed these requirements.

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

Community Rating System

The Town of Dover does not participate in the Community Rating System (CRS) program. The community has expressed interest in joining the CRS program, and would attend a CRS seminar if it was offered locally.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

Land Use Planning: The Town 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.

Town of Dover Comprehensive Plan 1993: The Town completed a Comprehensive Plan, which included the identification of natural hazard risk areas like floodplains, wetlands, and steep slopes, as well as land use and zoning recommendations for managing those risks. Some of the recommendations included the following:



- Protect and provide proper stewardship for the natural resource base on which the quality of life in Dover depends.
- The Town should use the federally designated 100-year floodplains that may interfere with their flood carrying function, create safety hazards, and increase the treat of property damage, of shift floodplain boundaries downstream.
- The flood hazard zones should be updated to conform to the latest federal floodplain maps.

Additionally, the Town is currently in the process of updating its Comprehensive Plan.

Conservation Planning: The Town of Dover Conservation Advisory Council is a seven member Council with terms expiring every two years. Within its advisory capacity, the CAC advises the Town Board on matters affecting the preservation, quality and use of the natural resources and environment of the Town of Dover. The duties of the CAC range from developing and conducting programs of public information in the community to increasing understanding of the nature of environmental problems and issues within the Town of Dover and such other studies as may be requested by the Town Board to ensure the wise use of natural resources and to enhance and protect the environment. They are also charged with creating and maintaining an up-to-date inventory and index of all open land and wetland areas in public or private ownership within the town so as to provide a base of information for recommendations as to their preservation and/or use as well as maintain liaison and communications with public and private agencies and organizations of local, state and national scope whose programs and activities have an impact on the quality of the environment or who can be of assistance to the Council. The CAC works in close cooperation wherever possible with the Town of Dover Town, Planning and Zoning Boards on various land use projects when requested and must maintain accurate records of meetings and activities. They are required by Town law to submit a monthly written report of such activities to the Town Board in time to be reviewed at the monthly Town Board business meeting, as well as file an annual report with the Dover Town Board on or before the 31st day of December of each and every year.

Regulatory and Enforcement

Flood Damage Prevention Chapter 81: 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 145: Dover'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: 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.



Wetland and Watercourse Protection Code Chapter 145-35: The Town's Wetland and watercourse protection code protects its wetlands and watercourses to maintain water quality and the health of natural ecosystems, reduce flooding, erosion, and sedimentation, and protect important wildlife habitat areas. The code requires coordination of state and federal wetland permits, watercourse and wetland delineation mapping, and imposition of other conditions to protect wetlands and watercourses of any proposed development and improvement projects.

Building Code Chapter 47: 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 Town'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 All Hazards Mitigation Plan Project web page with the information from the Northern and Eastern Dutchess County HMP including the plan and the public awareness and education presentation. The town also has an emergency information webpage with contact information. 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.

9.7.6 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 9.7-10. 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
Update floodplain ordinance based on forthcoming DFIRM maps to better regulate development, reconstruction, grading and filling of flood-prone properties.	Town Board, Planning Board, Town Engineer	In Progress	This project has not yet been started, although FEMA maps were updated to DFIRMs in 2012. Budget and personnel constraints have restricted this action from moving forward, and no funding has been secured yet.	Include in 2015 HMP	Carry action over as is.
Culvert upgrades and replacements and elevations to town roads with special attention to roads with repetitive FEMA-funded restoration and repairs.	Town Board, Town Highway	In Progress	This project is approximately 30 percent complete. The Town completed a major project on Holsapple Road in a particularly vulnerable portion of the road that received major storm damage. Repairs of Aldridge Road, Ashers Road, Blackberry Road, Cooperstown Road, Leather Hill Road, and Weil Road will be competed in the Summer of 2015. The Town is coordinating with the County to replace the Ridge Road Bridge during summer 2015. The road is owned by the Town and the bridge is owned by the County; the County is leading the project.	Include in 2015 HMP	Carry action. Add language to show road locations.
Develop and disseminate educational materials to all households regarding safety measures related to natural hazards throughout the community, and create newsletters, public events and website.	Town Board, Information Systems and GIS Department	In Progress	The Town disseminated an informational mailing on stormwater and floodplains over the last several years. The Town has identified additional public outreach and materials it would like to incorporate into public outreach campaigns.	Include in 2015 HMP	Carry action. Reword slightly to show current needs.
Create a “Hazard Information Center” with copies of current technical studies of natural resources.	Town Board, Information Systems and GIS Department, Conservation Advisory Committee	In Progress			



2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2015 HMP? or Discontinue)	Describe Next Step
Acquisition, relocation or rebuilding of repetitive loss properties in Ten Mile River flood plain.	Town Board Homeowners of repetitively flooded properties	No Progress	Still need to conduct outreach to evaluate interest. There are 15 primary properties, and there may be additional properties as well.	Include in 2015 HMP	Reword action to include outreach to repetitive loss property owners. There are 12-15 properties that sit right on the creek.
Harlem Valley State Hospital Reservoir barn repairs and safety management plan	Town Board Dover Knolls Development II Corp.	In Progress	The Town has completed work on the reservoir. The west side was bought by Olivet College, which cleaned up the area. Some of the identified concerns include saving existing property, environmental remediation, and dam issues (needs study of core and upgrades).	Include in 2015 HMP	
Develop and implement a drought ordinance and MS-4 stormwater management plan.	Town Board, Planning Board, Code Enforcement	In Progress	The Town is working on Stormwater Management plan.	Include in 2015 HMP	Include in the 2015 HMP.
Develop mutual aid agreements with neighboring communities to assist with natural hazard for emergency assistance, equipment, materials and associated services.	Town Board	Completed	The Highway Department has shared services, and there is Fire Mutual Aid. There is also an agreement with the Town of Beekman.	Discontinue	
Develop wildland/urban interface (WUI) mapping and ice jam early warning and monitoring plans.	Town Board, Information Systems and GIS Departments	In Progress	There were a couple initiatives that came out of the ice jam although little monitoring along the Ten Mile River. The Town only has one gage at the end of the watershed and needs more upstream gaging. The Town is working with ACOE for a reconnaissance study about other hazards in the watershed. ACOE needs a local partner (NYSDEC unless they pass to a local community), and the initial reconnaissance study has been completed. Cricket Valley Energy is installing a monitoring system regarding their use of the water. The County has no WUI mapping; however, the hazard vulnerability analysis indicates very low risk. The Town doesn't have fire towers and the like. In contrast, the Harlem Valley is the most vulnerable to wildfires in the County.	Include in 2015 HMP	Revise wording to indicate progress, and include ice jamming as an issue.



2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2015 HMP? or Discontinue)	Describe Next Step
Culvert Upgrades and Replacements: Weil Rd., Wingdale two locations. Repair a width 3' pipe (squash) headwall and wingwalls	County and Town	In Progress	The Town needs to look into progress on this.		
Culvert Upgrades and Replacements: 101 Cooperstown Rd. Dover Plains. Repair 3' and 4' x 40' culvert Headwall with wingwalls. Corbin Rd., Dover Plains. 4' x 40' metal Brasher Rd., Dover Plains. 5' x 30" culvert	County and Town		Cooperstown Road – Complete Corbin Road, Dover Plains - Complete Brasher Road - ?		
Culvert Upgrades and Replacements: 24 Sand Hill Rd., Dover Plains. 5' metal road width 213 Sand Hill Rd. 4' and headwall (angle) 227 Sand Hill Rd. 4' metal 20' headwall to headwall	County and Town		All Sand Hill Road done - but they will check.		
Culvert Upgrades and Replacements: McCort Rd., Dover Plains (near NYSEG Pole #422). 3' x 30' pipe	County and Town		We will give you a list of all for her to check.		
Culvert Upgrades and Replacements: Old Forge Rd., Wingdale. 9' culvert with squash pipe	County and Town				
Public awareness program on Hazards, Prevention, and Mitigation: Assist CP6 Chairperson in maintenance of mitigation planning web presence; assist CP6 Chairperson in preparation of annual hazards and mitigation planning fact sheet and its distribution; assist CP6 Chairperson in preparation of hazards survey; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/tv announcements, etc. at the discretion of the jurisdiction (incorporating as much free information as possible from the FEMA Publications Warehouse and other appropriate sources).					



2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2015 HMP? or Discontinue)	Describe Next Step
See above.	Town Board, Town Clerk				
Code update: Review existing local codes and ordinances against the identified hazards to determine whether there need to be any amendments to address identified hazards and, where a need is identified, modify/amend the codes/ordinances as applicable.	Town Board, Code Enforcement Officer	In Progress	The Town is working on the outdoor furnace code and recently updated stormwater code. The Town recently updated the wetlands watercourse code.	Include in 2015 HMP	Include in 2015 HMP
Code enforcement, Enforcement of NYS and Local Building Codes with Continual CEO training.	Town Board, Code Enforcement Officer	Ongoing	The Code Enforcement Officer attends County trainings, as available.	Include in 2015 HMP	This action can be an integrated action and does not need to be separate (as it is ongoing).
Require staff involved in Floodplain Management and ordinance enforcement to become Certified Floodplain Managers (CFMs).	Building Department	In Progress	The Town Floodplain Administrator has begun investigating this program but has not yet taken the CFM exam.	Include in 2015 HMP	Carry over action as is.
Join the Community Rating System (CRS)	Building Department	No Progress	The Town continues to be interested in this action but has not yet been able to investigate it.	Include in 2015 HMP	Carry over action as is.



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Town of Dover 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 Town of Dover maintains a shared services agreement with the Town of Beekman. The Town of Dover, in conjunction with the Town of Beekman is investigating a gas powered generator. The generator will be purchased from the Town Budget, and funding was underway as of the summer of 2015.
- The Town recently updated its wetlands watercourse code.
- The Town completed a major project on Holsapple Road in a particularly vulnerable portion of the road that received major storm damage.
- The Town completed the following culvert upgrades and replacements:
 - 101 Cooperstown Rd. Dover Plains. Repair 3' and 4' x 40' culvert
 - Corbin Rd., Dover Plains. 4' x 40' metal
 - 24 Sand Hill Rd., Dover Plains. 5' metal road width
 - 213 Sand Hill Rd. 4' and headwall (angle)
 - 227 Sand Hill Rd. 4' metal 20' headwall to headwall
- The Code Enforcement Officer attends County trainings on current codes and procedures

Proposed Hazard Mitigation Initiatives for the Plan

The Town of Dover was invited to 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). In 2015, the Town of Dover participated in a second workshop and was provided the results to the risk assessment to further assist with the identification of mitigation actions.

Table 9.7-11 summarizes the comprehensive-range of specific mitigation initiatives the Town of Dover 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 9.7-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan.



Table 9.7-11. 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
TD-1	Acquire a generator for Town Hall to promote continuity of local government and continuous communications access, among other things.	Existing	All Hazards	1, 5	Town Board	High – Reduced Risk to Critical Facility	Medium	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal	Short	High	SIP	PR, ES
TD-2	Secure the necessary communications technology and infrastructure to implement appropriate emergency communications and an effective public awareness campaign. Projects may include shared services with the Town of Beekman and aiding the County in a new public radio station.	N/A	All Hazards	3, 5	Town Board, Fire Departments	Medium - Improved emergency communications and public awareness	Medium – High	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal	DOF	Medium	EAP	PR, ES, PI
TD-3	Review and assess the Town’s public awareness campaign for efficacy. Develop and implement new programs and educational materials, as appropriate. These may include assisting the CP6 chairperson, surveys, newsletters, publications, and a “Hazard Information Center” with copies of current natural resource technical studies.	N/A	All Hazards	3	Town Board, Fire Departments	Medium - Improved public awareness	Low	Staff Time, County	Short	Medium	LPR, EAP	PR, ES, PI
TD-4	Update floodplain ordinance based on 2012 DFIRM maps to better regulate development, reconstruction, grading and filling of flood-prone properties.	Both	Flood	2, 7	Town Supervisor, Municipal NFIP FPA	Medium – Reduce risk-prone development	Medium	Staff Time, NYS DHSES, County	Short	Medium	LPR	PR
TD-5	Develop/update and implement appropriate plans and ordinances for the Town,	Both	All Hazards	6, 7	Town Supervisor, Planning	Medium – Long-term risk reduction	Low – Medium	Staff Time, NYS DHSES, County	Short	Medium	LPR	PR



Table 9.7-11. 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
	including a drought ordinance, outdoor furnace code, and stormwater management plan.				Board							
TD-6	Implement warning and monitoring programs and projects to reduce the risk of ice jams to the Town. Major project aspects may include installing upstream gages, completing a reconnaissance study with ACOE, coordinating with Cricket Valley Energy on water monitoring system reports, and completing appropriate risk mapping.	N/A	Ice Jams/ Flooding	3, 5	Town Highway Department, USACE	Medium – Improve preparedness and emergency response capabilities	Medium	Staff Time, NYS DHSES, County	DOF	Medium	LPR	PR, ES
TD-7	Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads, with special attention to roads with repetitive FEMA-funded restoration and repairs. Targeted roads for summer 2015 include but are not limited to: <ul style="list-style-type: none"> - Aldridge Road - Ashers Road - Blackberry Road - Cooperstown Road - Leather Hill Road - Weil Road 	N/A	Flood	2	Town Highway Department, NYSDOT	High -Reduced or eliminated risk to transportation infrastructure	Medium – High	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal	DOF	High	SIP	PP
TD-8	Implement appropriate infrastructure and road repairs and upgrades, as appropriate funding is secured. Targeted roads include but are not limited to:	N/A	Flooding, Severe Storm	2	Town Highway Department, NYSDOT	High -Reduced or eliminated risk to transportation infrastructure	Medium – High	FEMA or other mitigation grant funding, NYS DHSES, County,	DOF	High	SIP	PP



Table 9.7-11. 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
	<ul style="list-style-type: none"> - Craig Road (by Dover Flats) - Brasher Road (Dover Plains) - McCourt Road (Dover Plains) - Old Forge Road (Wingdale) - Four unnamed dirt roads 							Municipal				
TD-9	<p>Acquire and mitigate (through relocation, elevation, or rebuilding) repetitive loss properties in the Ten Mile River floodplain. As part of this process, conduct appropriate educational outreach to the relevant property owners, especially for the 12-15 properties that sit right along the creek.</p> <p>Promote and support other non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including all Repetitive Loss (RL – 5 currently) and Severe Repetitive Loss (SRL – 1 currently) properties.</p>	Exiting	Flooding, Severe Storm	2, 3	Municipal NFIP FPA; support from NYSOEM and FEMA	High - Reduced or eliminated risk to property damage from flooding	High	FEMA or other mitigation grant funding, NFIP flood insurance and ICC; property owner for local match.	Long-term DOF	High	SIP, EAP	PP, PI
TD-10	Require staff involved in Floodplain Management and ordinance enforcement to become Certified Floodplain Managers (CFMs).	N/A	Flood	3, 7	Town Board	Medium – Increased floodplain management capabilities on Town staff	Low	Staff Time, NYS DHSES, County	Short	Medium	LPR	PR
TD-11	Join the Community Rating System (CRS)	Both	Flood, Severe Storms	3, 6, 7	Town Board, Municipal	Low – premium reductions for 51 policy	Medium	Staff Time, NYS DHSES, County	Short	Low	LPR	PR



Table 9.7-11. 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
					NFIP FPA	holders (Town pop. 8,699)						
TD-12	Notify and provided needed support to the facility manager/operator of Crystal House Manor to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES, County, Municipal	Short	Medium	EAP, LPR	PI, PP
TD-13	Notify and provided needed support to the facility manager/operator of Dover Plains Post Office to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES, County, Municipal	Short	Medium	EAP, LPR	PI, PP
TD-14	Notify and provided needed support to the facility manager/operator of Harlem Valley Pump to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES, County, Municipal	Short	Medium	EAP, LPR	PI, PP
TD-15	Notify and provided needed support to the facility manager/operator of Harlem	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES,	Short	Medium	EAP, LPR	PI, PP



Table 9.7-11. 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
	Valley Wingdale Rail Station to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".							County, Municipal				
TD-16	Notify and provided needed support to the facility manager/operator of NDP St. 3 to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES, County, Municipal	Short	Medium	EAP, LPR	PI, PP
TD-17	Notify and provided needed support to the facility manager/operator of Regan's Mill Wastewater Treatment Plant to evaluate the facility's flood vulnerability and to identify feasible mitigation options. Assure that any mitigation addresses the 500-year flood event or "worse damage scenario".	Existing	Flood, Severe Storms	2, 3	Municipal NFIP FPA	High – Reduced Risk to Critical Facility	Low	Staff Time, FEMA, NYS DHSES, County, Municipal	Short	Medium	EAP, LPR	PI, 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

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program

Timeline:

Short 1 to 5 years





CRS	Community Rating System	HMGP	Hazard Mitigation Grant Program	Long Term	5 years or greater
DPW	Department of Public Works	PDM	Pre-Disaster Mitigation Grant Program	OG	On-going program
FEMA	Federal Emergency Management Agency	RFC	Repetitive Flood Claims Grant Program (discontinued)	DOF	Depending on funding
FPA	Floodplain Administrator	SRL	Severe Repetitive Loss Grant Program (discontinued)		
HMA	Hazard Mitigation Assistance				
N/A	Not applicable				
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 9.7-12. 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
TD-1	Acquire a generator for Town Hall to promote continuity of local government and continuous communications access, among other things.																High
TD-2	Secure the necessary communications technology and infrastructure to implement appropriate emergency communications and an effective public awareness campaign. Projects may include shared services with the Town of Beekman and aiding the County in a new public radio station.																Medium
TD-3	Review and assess the Town's public awareness campaign for efficacy. Develop and implement new programs and educational materials, as appropriate. These may include assisting the CP6 chairperson, surveys, newsletters, publications, and a "Hazard Information Center" with copies of current natural resource technical studies.																Medium
TD-4	Update floodplain ordinance based on 2012 DFIRM maps to better regulate development, reconstruction, grading and filling of flood-prone properties.																Medium
TD-5	Develop/update and implement appropriate plans and ordinances for the Town, including a drought ordinance, outdoor furnace																Medium



Table 9.7-12. 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
	code, and stormwater management plan.																
TD-6	Implement warning and monitoring programs and projects to reduce the risk of ice jams to the Town. Major project aspects may include installing upstream gages, completing a reconnaissance study with ACOE, coordinating with Cricket Valley Energy on water monitoring system reports, and completing appropriate risk mapping.																Medium
TD-7	Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads, with special attention to roads with repetitive FEMA-funded restoration and repairs. Targeted roads for summer 2015 include but are not limited to: <ul style="list-style-type: none"> - Aldridge Road - Ashers Road - Blackberry Road - Cooperstown Road - Leather Hill Road - Weil Road 																High
TD-8	Implement appropriate infrastructure and road repairs and upgrades, as appropriate funding is secured. Targeted roads include but are not limited to: <ul style="list-style-type: none"> - Craig Road (by Dover 																High



Table 9.7-12. 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
	Flats) - Brasher Road (Dover Plains) - McCourt Road (Dover Plains) - Old Forge Road (Wingdale) - Four unnamed dirt roads																
TD-9	Acquire and mitigate (through relocation, elevation, or rebuilding) repetitive loss properties in the Ten Mile River floodplain. As part of this process, conduct appropriate educational outreach to the relevant property owners, especially for the 12-15 properties that sit right along the creek. Promote and support other non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including all Repetitive Loss (RL – 5 currently) and Severe Repetitive Loss (SRL – 1 currently) properties.																High
TD-10	Require staff involved in Floodplain Management and ordinance enforcement to become Certified Floodplain Managers (CFMs).																Medium
TD-11	Join the Community Rating System (CRS)																Low
TD-12	Notify and provided needed																Medium



Table 9.7-12. 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
	support to the facility manager/operator of Crystal House Manor to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																
TD-13	Notify and provided needed support to the facility manager/operator of Dover Plains Post Office to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																Medium
TD-14	Notify and provided needed support to the facility manager/operator of Harlem Valley Pump to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																Medium
TD-15	Notify and provided needed support to the facility manager/operator of Harlem Valley Wingdale Rail Station to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																Medium
TD-16	Notify and provided needed support to the facility manager/operator of NDP St. 3 to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																Medium
TD-17	Notify and provided needed support to the facility																Medium



Table 9.7-12. 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
	manager/operator of Regan's Mill Wastewater Treatment Plant to evaluate the facility's flood vulnerability and to identify feasible mitigation options.																

Note (1): Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.

Note (2): To date, the Town has not established a summary of prioritization for the identified actions.



9.7.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.7.8 Hazard Area Extent and Location

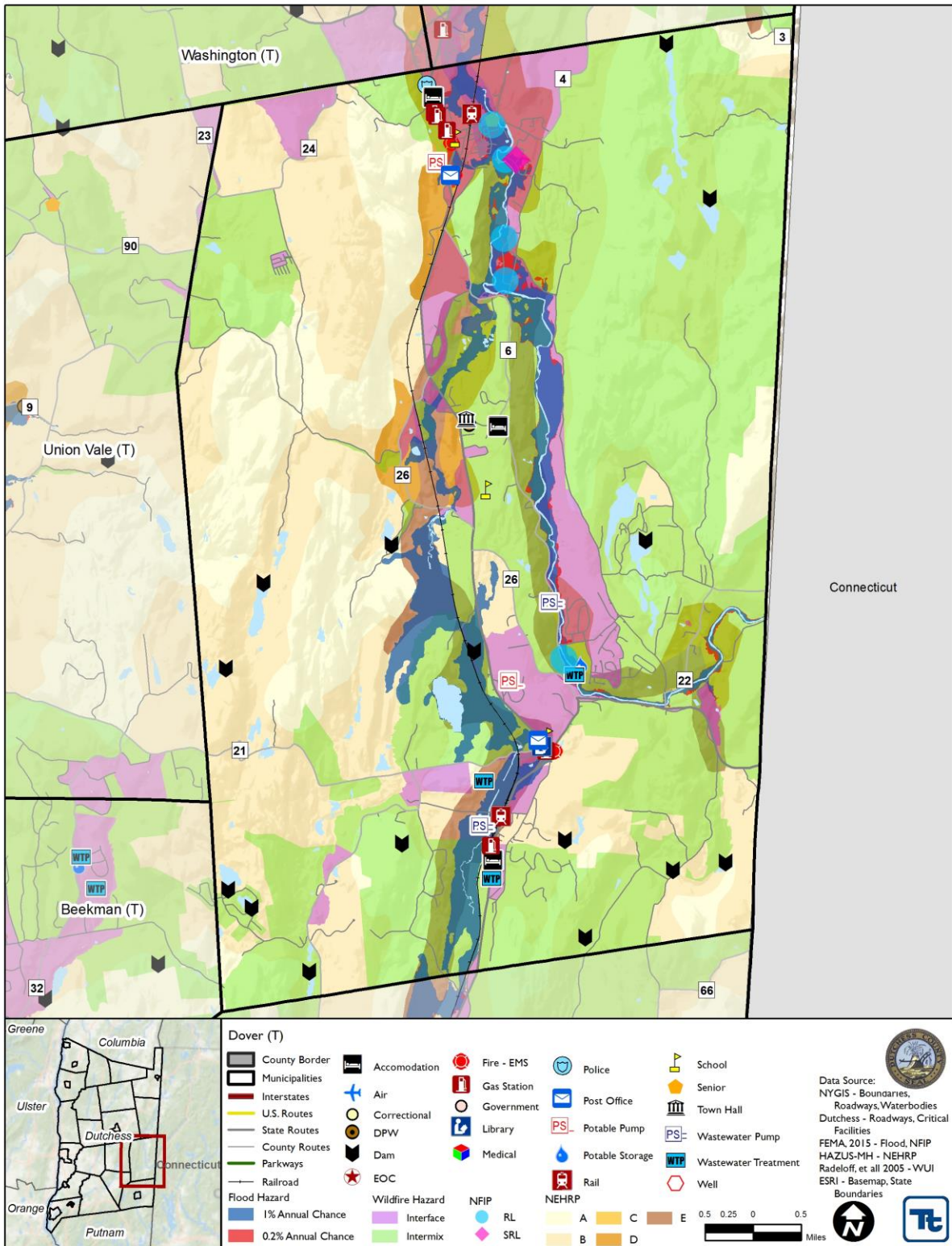
Hazard area extent and location maps have been generated for the Town of Dover that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Dover has significant exposure. Figure 9.7-1 illustrates the hazard area and extent for the Town.

9.7.9 Additional Comments

None at this time.



Figure 9.7-1. Town of Dover Hazard Area Extent and Location Map





Action Number:

TD-1

Action Name:

Acquire a generator for Town Hall

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	During power outages, the Town Hall is not capable of functioning properly and not able to provide continuous communications to essential personnel.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	Acquire a generator for Town Hall to promote continuity of local government and continuous communications access, among other things.
	Do nothing – current problem continues
	No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Acquire a generator for Town Hall to promote continuity of local government and continuous communications access, among other things.
Mitigation Action/Project Type	SIP
Goals Met	1, 5
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	High – Reduced Risk to Critical Facility
Estimated Cost	Medium
Priority*	High
Plan for Implementation	
Responsible Organization	Town Board
Local Planning Mechanism	Emergency Management, Hazard Mitigation
Potential Funding Sources	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal
Timeline for Completion	Short
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:

TD-1

Action Name:

Acquire a generator for Town Hall

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	High	



Action Number:

TD-2

Action Name:

Secure the necessary communications technology and infrastructure

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Lack of appropriate emergency communication equipment in the Town; lack of an effective public awareness program
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	Secure the necessary communications technology and infrastructure to implement appropriate emergency communications and an effective public awareness campaign. Projects may include shared services with the Town of Beekman and aiding the County in a new public radio station.
	1. public awareness campaign. Projects may include shared services with the Town of Beekman and aiding the County in a new public radio station.
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Secure the necessary communications technology and infrastructure to implement appropriate emergency communications and an effective public awareness campaign. Projects may include shared services with the Town of Beekman and aiding the County in a new public radio station.
Mitigation Action/Project Type	EAP
Goals Met	3, 5
Applies to existing structures/infrastructure, future, or not applicable	N/A
Benefits (losses avoided)	Medium -Improved emergency communications and public awareness
Estimated Cost	Medium – High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Board, Fire Departments
Local Planning Mechanism	Emergency Management, Hazard Mitigation
Potential Funding Sources	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal
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:

TD-2

Action Name:

Secure the necessary communications technology and infrastructure

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	Medium	



Action Number:

TD-7

Action Name:

Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads,

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Numerous roadways in the Town become inundated during periods of rain; damaging roadways, culverts, and buildings
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads, with special attention to roads with repetitive FEMA-funded restoration and repairs. - Aldridge Road - Ashers Road - Blackberry Road - Cooperstown Road - Leather Hill Road - Weil Road
Mitigation Action/Project Type	SIP
Goals Met	2
Applies to existing structures/infrastructure, future, or not applicable	N/A
Benefits (losses avoided)	High -Reduced or eliminated risk to transportation infrastructure
Estimated Cost	Medium – High
Priority*	High
Plan for Implementation	
Responsible Organization	Town Highway Department, NYSDOT
Local Planning Mechanism	Capital Improvement, Hazard Mitigation
Potential Funding Sources	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal
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:

TD-7

Action Name:

Implement appropriate infrastructure upgrades, e.g., culvert upgrades, replacements and elevations, to town roads

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	High	



Action Number:

TD-8

Action Name:

Implement appropriate infrastructure and road repairs and upgrades

Assessing the Risk	
Hazard(s) addressed:	Flooding, Severe Storm
Specific problem being mitigated:	Roadways in the Town are in need of repairs and upgrades to make them more resistant to severe storms, flooding and winter storms.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Implement appropriate infrastructure and road repairs and upgrades
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Implement appropriate infrastructure and road repairs and upgrades, as appropriate funding is secured. Targeted roads include but are not limited to: - Craig Road (by Dover Flats) - Brasher Road (Dover Plains) - McCourt Road (Dover Plains) - Old Forge Road (Wingdale) - For unnamed dirt roads
Mitigation Action/Project Type	SIP
Goals Met	2
Applies to existing structures/infrastructure, future, or not applicable	N/A
Benefits (losses avoided)	High -Reduced or eliminated risk to transportation infrastructure
Estimated Cost	Medium – High
Priority*	High
Plan for Implementation	
Responsible Organization	Town Highway Department, NYSDOT
Local Planning Mechanism	Capital Improvement, Hazard Mitigation
Potential Funding Sources	FEMA or other mitigation grant funding, NYS DHSES, County, Municipal
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:

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Implement appropriate infrastructure and road repairs and upgrades

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	High	