# 9.6 TOWN OF CATSKILL

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

## A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
Peter Markou, Town Supervisor	Linda Speckman, Code Enforcement Officer
439 Main Street	439 Main Street
Catskill, NY 12414	Catskill, NY 12414
518-943-2141	518-943-2141
Email: supervisor@townofcatskillny.gov	E-mail: code@townofcatskillny.gov

## **B.)** TOWN PROFILE

## Population

11,822 (estimated 2007 U.S. Census)

### Location

The Town of Catskill is located in the southeast portion of Greene County. The western part of the Town is located in Catskill Park. The Town of Catskill has a total area of 64.2 square miles, of which 60.5 square miles is land and 3.7 square miles is water. The Hudson River borders the Town to the east, forming the border of Columbia County. Ulster County forms the southern Town line. The New York State Thruway and U.S. Route 9W pass through the Town of Catskill.

### Climate

Greene County, with all its municipalities, generally experiences seasonable weather patterns characteristic of the northeastern U.S. Warm summers are typically experienced, with occasional high temperatures and humidity. Midsummer temperatures typically range from about 68°F to 80°F (Fahrenheit). The winters of Greene County are long and cold. Winter high temperatures are usually in the middle to upper 20s°F, with minimum temperatures of 15°F expected. During the winter, temperatures are cooler than the temperatures in areas located near large bodies of water. Snow accumulates to an average depth of 68 inches each year.

## Brief History

The area of the Town of Catskill was purchased in 1678 and settlement soon followed. The Town was established in 1788, while still a part of Albany County. The Town of Catskill's size increased by an addition from the Town of Woodstock in 1800, but was later decreased upon the formation of the Towns of Cairo and Athens.

### **Governing Body Format**

The Town of Catskill is governed by a Town Supervisor and four Town Councilmen, elected to staggered terms. Other elected positions include the Town Clerk, Highway Superintendent, Receiver of Taxes, and Town Justices (2). This elected team supports eight departments: Clerk's Office, Code Enforcement, Assessor, Comptroller, Highway Department, Town Court, Receiver of Taxes, and the Washington Irving Senior Center. Finally, special boards, such as the Town Planning Board, Zoning Board of Appeals,



Recreation Committee, and Board of Assessment Review serve the Town of Catskill in specific capacities.

### Growth/Development Trends

Several residential and commercial development plans have been advanced for consideration by the Town, but none have so far reached fruition beyond the creation of a few residential subdivisions. On a more global scale, the Town and Village of Catskill paired to create a Joint Comprehensive Plan for growth and development in 2008. This plan is intended to be a road map to sensible growth and development throughout the Town and Village. According to the Greene County Comprehesive Economic Development Plan (2007):

	Town and Village of Catskill
	Residential
	<ul> <li>Former Irving School redevelopment projects</li> </ul>
	Route 23A in Kiskatom
	Commercial
	Former Grandview School redevelopment projects
	Route 32 in Kiskatom
	• Winter's Route 23B
	Price Chopper expansion
reas	Industrial
Potential Growth Areas	• The proposed Catskill Industrial Park was designated as an Empire Zone for new industrial
owt	and commercial development.
l Gr	• Saint Lawrence Cement: SLC announced in April 2005 that it was dropping plans to build a
ntia	\$353 million coal fired cement plan in Greenport, Columbia County. At the same time, SLC
Pote	announced a ne \$10 million investment program at its Catskill plant to improve its reliability
-	and overall performance.
	<u>Government/Community</u>
	New ambulance building.
	<ul> <li>Margraff Property to be preserved as park and open space.</li> </ul>

## C.) NATURAL HAZARD EVENT HISTORY SPECIFIC TO THE TOWN

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood (Hurricane Diane)	DR-45	August, 1955	Not available
Flood (Hurricane Katie)	DR-52	October, 1955	Not available
Snowstorm / Extreme Cold	Not applicable	January, 1961	\$8,000
Extreme Cold	Not applicable	January, 1963	Not available
Extreme Cold	Not applicable	February, 1963	Not available
Snowstorm / Extreme cold	Not applicable	January, 1964	Not available
Extreme Cold	Not applicable	January, 1971	Not available
Extreme Cold	Not applicable	February, 1971	Not available
Flood (Tropical Storm Agnes)	Not applicable	June, 1972	\$806,000 (countywide)
Extreme Cold	Not applicable	February, 1980	Not available



	FEMA Disaster #		Preliminary Damage
Type of Event	(if applicable)	Date	Assessment
Flood	DR-792	April, 1987	\$2,000,000 (countywide)
Severe Winter Storm	DR-801	October, 1987	Not available
Ice Storm	Not applicable	December, 1991	\$385,000 (countywide)
Blizzard / Extreme Cold	EM-3107	March, 1993	Not available
Extreme Cold	Not applicable	January, 1994	Not available
Flood	Not applicable	October, 1995	\$3,000,000 (countywide)
Blizzard	DR-1083	January, 1996	\$160,000 (countywide)
Severe Storm and Flooding	DR-1095	January, 1996	\$10,000,000 (countywide)
Ice Jam	Not applicable	January, 1996	Not available
Snowstorm	Not applicable	March / April, 1997	\$709,000 (countywide)
Flood	Not applicable	June, 1998	\$25,000
TSTM / Lightning	Not applicable	May, 1999	\$50,000
Severe Storm/Flooding (Hurricane Floyd)	DR-1295	September, 1999	\$3,000,000 (countywide)
Severe Storms	DR-1335	May/September, 2000	\$115,000 (countywide)
TSTM / Hail / Lightning	Not applicable	June, 2001	Between \$370,000 and \$400,000 (countywide)
Snowstorm	EM-3173	December 2002 / January 2003	\$29,000
Snowstorm	EM-3184	February, 2003	Not available
Landslide	Not applicable	March 2003	Not available
Severe Storms, Tornado, and Flooding	DR-1486	July/August, 2003	Between \$75,000 and \$1,100,000 (countywide)
Snowstorm	Not applicable	December, 2003	Not available
Flood (Hurricane Ivan)	Not applicable	September, 2004	Not available
Snowstorm	Not applicable	January, 2005	Not available
Severe storms and Flooding	DR-1589	April, 2005	\$1,300,000 (countywide)
Flood	Not applicable	July, 2005	Not available
Flood (Tropical Cyclone Tammy)	Not applicable	October, 2005	Not available
Severe storms and Flooding	DR-1650	June/July, 2006	Not available
Snowstorm (Valentine's	Not applicable	February, 2007	Not available



Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Day Storm)			
Snowstorm (St. Patrick's Day Storm)	Not applicable	March, 2007	Not available
Severe Storms and Inland and Coastal Flooding (Nor'Easter)	DR-1692	April, 2007	Between \$1,300,000 and \$111,000,000 (may be inaccurate) (countywide)
Severe Ice Storm	DR-1827	12-13 to 12-31-08	Approximately \$1,200,000 county-wide

Number of FEMA Identified Repetitive Flood Loss Properties:5 aNumber of FEMA Identified Severe Repetitive Flood Loss Properties:3 a

<sup>a</sup> Source: FEMA Region II, 2008.



Rank #	Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>♭</sup>					
4	Earthquake	\$5,560,324 <sup>e</sup>	Low	10	Low					
1	Flood	\$30,927,000 <sup>e</sup>	High	54	High					
3	Ground Failure	Not available <sup>g</sup>	Medium	24	Medium					
1	Severe Storm	\$1,851,389 <sup>d</sup>	High	54	High					
2	Severe Winter Storm	\$63,018,300 <sup>d</sup>	High	48	High					
a.	Building damage ratio estimates based on FEMA 386-2 (August 2001)									

#### **D**.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

b. High = Total hazard priority risk ranking score of 40 and above

Medium = Total hazard priority risk ranking of 20-39

Low = Total hazard risk ranking below 20

The valuation of general building stock and loss estimates determined in Greene County were based on the default c. general building stock database provided in HAZUS-MH MR3 (R.S. Means 2006).

500-year MRP structural value loss estimate only; does not include the value of contents. For severe winter storm, d. the loss estimate is 10% of total general building stock value.

Loss estimates for both structure and contents (500-year MRP for the flood hazard and 2,500-year MRP for the e. earthquake hazard).

f. 34.5% of the general building stock in the Town of Catskill is exposed or located within the approximate landslide hazard area.

#### **E.**) **CAPABILITY ASSESSMENT**

This section identifies the following capabilities of the local jurisdiction:

- Legal and regulatory capability
- Administrative and technical capability .
- **Fiscal capability** •
- Community classification. •



# E.1) Legal and Regulatory Capability

Regulatory Tools (Codes, Ordinances., Plans)	Local Authority (Y or N)	Prohibitions (State or Federal) (Y or N)	Higher Jurisdictional Authority (Y or N)	State Mandated (Y or N)	<b>Code Citation</b> (Section, Paragraph, Page Number, date of adoption)
1) Building Code	Y	N	Ν	Y	Chapter 84 Local Law 5-2006 (12/27/06)
2) Zoning Ordinance	Y	N	Ν	Ν	Chapter 160 Local Law 4-1988 (10/4/88) Amended Local Law 3-1995 (2/7/95)
3) Subdivision Ordinance	Y	N	Ν	Ν	Chapter 140 Local Law 1-2007 (1/17/07)
4) NFIP Flood Damage Prevention Ordinance (if you are in the NFIP, you <b>must</b> have this.)	Y	Y	Y	Y	Effective Date: 4/2/2008
5) Growth Management	Ν	N	Ν	Ν	
6) Floodplain Management / Basin Plan	Ν	N	Y	Ν	
7) Stormwater Management Plan/Ordinance	Ν	N	Y	N	
8) Comprehensive Plan / Master Plan/ General Plan	Y	N	Ν	Ν	2/5/08
9) Capital Improvements Plan	N	N	N	Ν	
10) Site Plan Review Requirements	Y	N	Ν	N	
11) Open Space Plan	N	N	Ν	Ν	
12) Economic Development Plan	Ν	Ν	Y	Ν	
13) Emergency Response Plan	Y	N	Y	Y	9/5/03
14) Post Disaster Recovery Plan	Y	N	Ν	N	Included in the Emergency Response Plan
15) Post Disaster Recovery Ordinance	N	N	Ν	N	
16) Real Estate Disclosure req.	N	N	N	N	
17) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	Y	N	Ν	Ν	Chapter 140 Local Law 4-2008 (4/1/08)



# E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or No)	Department/ Agency/Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Contract
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Contract
3) Planners or engineers with an understanding of natural hazards	Y	Contract
4) NFIP Floodplain Administrator (if you are in the NFIP, you <b>must</b> have one.)	Y	Linda Speckman, Code Enforcement Officer
5) Surveyor(s)	Ν	
6) Personnel skilled or trained in "GIS" applications	Y	Contract
7) Scientist familiar with natural hazards in the Town of Catskill.	N	
8) Emergency Manager		
9) Grant Writer(s)	Y	Contract
10) Staff with expertise or training in benefit/cost analysis	Y	Peter Markou, Town Supervisor



# **E.3) Fiscal Capability**

Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)		
1) Community development Block Grants (CDBG)	Yes		
2) Capital Improvements Project Funding	Yes		
3) Authority to Levy Taxes for specific purposes	Yes		
4) User fees for water, sewer, gas or electric service	Yes		
5) Impact Fees for homebuyers or developers of new development/homes	No		
6) Incur debt through general obligation bonds	Yes		
7) Incur debt through special tax bonds	Yes		
8) Incur debt through private activity bonds	No		
9) Withhold public expenditures in hazard-prone areas	No		
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	No		
11) Other			

## **E.4) Community Classifications**

Program	Classification	Date Classified
Community Rating System (CRS)	N/A	
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	
Public Protection	N/A	
Storm Ready	N/A	
Firewise	N/A	

• N/A = Not applicable. - = Unavailable.

The classifications listed above relate to the community's effectiveness in providing services that may impact it's vulnerability to the natural 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 one (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 <a href="http://www.isomitigation.com/ppc/0000/ppc0001.html">http://www.isomitigation.com/ppc/0000/ppc0001.html</a>
- The National Weather Service Storm Ready website at <u>http://www.weather.gov/stormready/howto.htm</u>



• The National Firewise Communities website at <u>http://firewise.org/</u>



# F.) PROPOSED HAZARD MITIGATION INITIATIVES

Initiative	Mitigation Initiative	Applies to new or existing structures	Hazard(s) Mitigated	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
TCA- 1A	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	2, 4, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF
TCA- 1B	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost- effectiveness versus retrofitting. Where relocation is determined	Existing	Flood, Severe Storm	2, 4, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF



Initiative	Mitigation Initiative	Applies to new or existing structures	Hazard(s) Mitigated	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	to be a viable option, consider implementation of that action based on available funding.								
TCA-2	As appropriate, support participation in incentive- based programs such as CRS.	New & Existing	Flood	2, 3, 4, 5, 6, 8, 9, 10, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, ISO, FEMA	Low - Medium	Local Budget	Short
TCA-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	All Objectives	Municipality (through mitigation planning point of contacts)	County (through Mitigation Planning Coordinator), SEMO	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing
TCA-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	2, 3, 4, 5, 6, 8, 9, 10, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, ISO, FEMA	Low - Medium	Local Budget	Ongoing
TCA-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 7, 8, 9	Municipal Emergency Manager with support from County OEM and SEMO	County Emergency Management, SEMO	Low - Medium	Local Budget	Ongoing
TCA-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	1,7,8, 9	Local Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing
TCA-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All objectives	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where	Ongoing – Long-term depending on initiative



Initiative	Mitigation Initiative	Applies to new or existing structures	Hazard(s) Mitigated	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
TCA-8	Consider house elevation projects in the area of Leeds with historical repetitive flooding. Development in the floodplain has been limited, and problems are primarily associated with flooding of several structures located in the 100-year floodplain west of the hamlet of Leeds in Catskill. In the Leeds area, there is an area of repetitive flooding which affects two to three homes and one to two commercial properties.	Existing	Flood, Severe Storm, Severe Winter Storm	2, 3, 4, 6, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF
TCA-9	Support buyout or elevation projects for commercial properties in the area of Leeds with historical repetitive flooding. Development in the floodplain has been limited, and problems are primarily associated with flooding of several structures located in the 100-year floodplain west of the hamlet of Leeds in Catskill. In the Leeds area, there is an area of repetitive flooding which affects two to three homes and one to two commercial properties.	Existing	Flood, Severe Storm, Severe Winter Storm	2, 3, 4, 6, 11	Municipality (likely through NFIP Floodplain Administrator)	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF

Notes: Short term = 1 to 5 years. Long Term = 5 years or greater. OG = On going program. DOF = Depending on funding. PDM = Pre-Disaster Mitigation Grant Program.



# G.) ANALYSIS OF MITIGATION ACTIONS

This table summarizes the participant's mitigation actions by hazard of concern and the six mitigation types to illustrate that the Town has selected a comprehensive range of actions/projects.

	Mitigation Type							
Hazard of Concern	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects		
Earthquake	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-5, TCA-6, TCA-7	TCA-3, TCA-7		
Flooding (riverine, flash, coastal and urban flooding)	TCA-2, TCA-3, TCA-4, TCA-7	TCA-1, TCA-2, TCA-3, TCA-4, TCA-7, TCA-8, TCA-9	TCA-1, TCA-2, TCA-3, TCA-4, TCA-7, TCA-8, TCA-9	TCA-3, TCA-7	TCA-2, TCA-3, TCA-5, TCA-6, TCA-7	TCA-3, TCA-7		
Ground Failure	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-7	TCA-3, TCA-5, TCA-6, TCA-7	TCA-3, TCA-7		
Severe Storms (windstorms, thunderstorms, hail, lightning and tornados)	TCA-2, TCA-3, TCA-4, TCA-7	TCA-1, TCA-2, TCA-3, TCA-4, TCA-7, TCA-8, TCA-9	TCA-1, TCA-2, TCA-3, TCA-4, TCA-7, TCA-8, TCA-9	TCA-3, TCA-7	TCA-2, TCA-3, TCA-5, TCA-6, TCA-7	TCA-3, TCA-7		
Severe Winter Storm (heavy snow, blizzards, ice storms)	TCA-3, TCA-7	TCA-3, TCA-7, TCA-8, TCA-9	TCA-3, TCA-7, TCA-8, TCA-9	TCA-3, TCA-7	TCA-3, TCA-5, TCA-6, TCA-7	TCA-3, TCA-7		

Notes:

1. Prevention: Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.

2. Property Protection: 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.

3. Public Education and Awareness: 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 school-age and adult education programs.

4. Natural Resource Protection: 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.

5. Emergency Services: 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.

6. Structural Projects: 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.



Initiative #	# of Objectives met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
TCA- 1A	3	н	Н	Y	Y	Ν	M-H*
TCA- 1B	3	н	н	Y	Y	Ν	M-H*
TCA- 2	9	М	L	Y	Ν	Y	н
TCA- 3	11	М	М	Y	N (Yes for 5 year update)	Y	н
TCA- 4	9	н	L	Y	Ν	Y	Н
TCA- 5	4	М	L	Y	Ν	Y	н
TCA- 6	4	М	L	Y	Ν	Y	н
TCA- 7	11	M-H	L-M	Y	Dependant on specific initiative	Dependant on specific initiative	M-H (dependant)
TCA- 8	5	н	н	Y	Y	Ν	М
TCA- 9	5	Н	Н	Y No. N/A – Not apr	Y	Ν	М

# H.) PRIORITIZATION OF MITIGATION INITIATIVES

Notes: H = High. L = Low. M = Medium. N = No. N/A = Not applicable. Y = Yes.

\* This initiative has a "Medium" priority based on the prioritization scheme used in this planning process (implementation dependent on grant funding), however it is recognized that addressing repetitive and severe repetitive loss properties is considered a high priority by FEMA and SEMO (as expressed in the State HMP), and thus shall be considered a "High" priority for all participants in this planning process.

# **Explanation of Priorities**

• *High Priority* - A project that meets multiple objectives (i.e., multiple hazards), benefits exceeds cost, has funding secured or is an on-going project and project meets eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation



Grant Program (PDM) programs. High priority projects can be completed in the short term (1 to 5 years).

- *Medium Priority* A project that meets goals and objectives, benefits exceeds costs, funding has not been secured but project is grant eligible under, HMGP, PDM or other grant programs. Project can be completed in the short term, once funding is completed. Medium priority projects will become high priority projects once funding is secured.
- *Low Priority* Any project that will mitigate the risk of a hazard, benefits do not exceed the costs or are difficult to quantify, funding has not been secured and project is not eligible for HMGP or PDM grant funding, and time line for completion is considered long term (1 to 10 years). Low priority projects may be eligible other sources of grant funding from other programs. A low priority project could become a high priority project once funding is secured as long as it could be completed in the short term.

Prioritization of initiatives was based on above definitions: Yes

Prioritization of initiatives was based on parameters other than stated above: Not applicable.

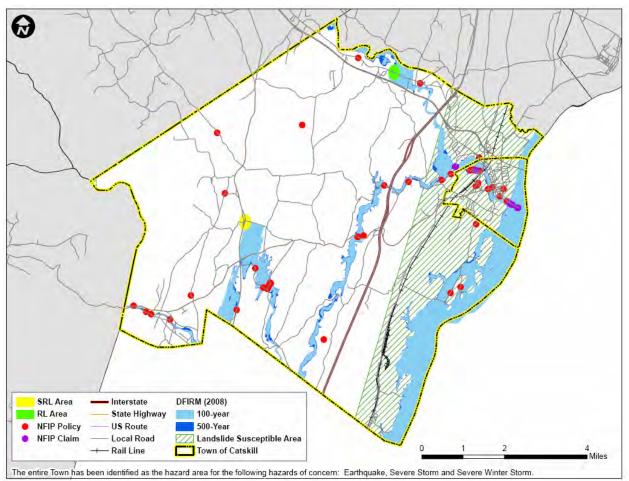
## I.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

None at this time.

## J.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated and is provided below for the Town of Catskill to illustrate the probable areas impacted within the Town. This map is based on the best available data at the time of the preparation of this Plan, and is 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 Catskill has significant exposure. The county maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.





Sources: FEMA DFIRM, 2008; FEMA Region II, 2008; Greene County Planning and Economic Development, 2008; NYSDPC, 2008

Notes: DFIRM = Digital Flood Insurance Rate Map. NFIP = National Flood Insurance Program; RL = Repetitive Loss; SRL = Severe Repetitive Loss

# K.) ADDITIONAL COMMENTS

In the Palenville hamlet within the Town of Catskill, the Kaaterskill Creek floodwaters have repeatedly impacted roadways and structures. This has led to the development and implementation of the Kaaterskill Creek Flood Mitigation Project (Lower Hudson Coalition of Conservation Districts, 2001-2002).

