

9.26 TOWN OF STILLWATER

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

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
Primary Point of Contact: Name/Title Edward Kinoski, Supervisor Mailing Address P.O.Box 700 Stillwater, NY 12170 Phone: (518) 664-6148 E-mail: EKinoski@stillwaterNY.org	Alternate Point of Contact: Name/Title Mark Minick, Highway Superintendent Mailing Address P.O. Box 700 Stillwater, NY 12170 Phone: (518) 664-4611 x 211 E-mail:

B.) TOWN PROFILE

Population

8,177 (estimated 2007 U.S. Census)

Location

The Town of Stillwater is located in the eastern section of Saratoga County. It is bounded on the north by Saratoga, on the east by the county line, on the south by Halfmoon and on the west by Malta. Stillwater is the principal village. It is located near the center of the eastern border of the town on the bank of the Hudson River. Mechanicville is also partially located within the town. The east town line is the border of Rensselaer County and Washington County, marked by the Hudson River. US Route 4, partly conjoined with New York State Route 32 follows the Hudson River through the town. New York State Route 423 is an east-west highway in the northern part of Stillwater. New York State Route 9P is a north-south highway in the northwestern part of the town by Saratoga Lake. New York State Route 67 runs along the south town line.

According to the U.S. Census Bureau, the town has a total area of 43.6 square miles, with 41.4 square miles of it land and 2.2 square miles (5.07-percent) of it water.

Climate

Saratoga 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 60°F to 83°F (Fahrenheit). The winters of Saratoga County are long and cold, with temperatures typically ranging from 12°F to 30°F (Fahrenheit). During the winter, temperatures are cooler than the temperatures in areas located near large bodies of water. Snow accumulates to an average depth of 68.7 inches each year.

Brief History

The Stillwater area was occupied by the Iroquois and Mohican natives when the colonial period began. In 1709, Peter Schuyler built Fort Ingoldsby in town because of its location on the frontier of the French and Indian Wars. A replica of Schuyler's fort currently serves as the Stillwater Blockhouse Museum. Settlers began arriving after 1730. During the American Revolution, residents participated in the war, and part of

the Battle of Saratoga was fought in the town so that the town now refers to itself as the turning point of the American Revolution. Stillwater was established as a town in 1791, when Saratoga County was formed. In 1816, the community of Stillwater set itself off from the town by incorporating as a village. Another small part of the town was lost in 1859 when Mechanicville became a village.

Governing Body Format

This information is not available at this time.

Growth/Development Trends

Development within the Town has primarily been in areas supported by public water and sewer. This has been areas adjacent to the Village of Stillwater, City of Mechanicville and along Saratoga Lake and is in the form of primarily residential subdivisions.

According to the Town of Stillwater Comprehensive Plan, the Luther Forest Technology Campus (LFTC) Planned Development District (PDD), located on the Malta-Stillwater Town Line approximately one-half mile southeast of Dunning Street and Route 9 in the Town of Malta, and west of Cold Springs Road in the Town of Stillwater is an area of future growth and development. The project site contains approximately 1,350 acres of land and proposed to contain a mixture of industrial, commercial, and residential uses, including up to four silicon computer chip manufacturing facilities, 2-million square feet of support uses such as a hotel/conference center, support businesses/offices, and up to 50 residential homes. Development of the LFTC is planned to occur in five phases over a fifteen to twenty-five year build-out period (The Chazen Companies, 2005).

In 2009, construction of the first of three chip fabrication (fab) facilities commenced within the Town of Malta and is planned to come on line in 2012. While the first fab is constructed in Malta, the growth impacts will be felt in Stillwater which will likely generate demand for increased housing stock as well as supporting commercial/retail uses.

The Town is currently considering a rezoning of portions of Rt, 67, near the intersection fo George Thompson Road that would promote mixed use developments which would be driven by the development of the LFTC PDD. Additionally, there are discussions of developing a business park via a rezone of several hundred acres that would provide primary support to business that could potentially service the LFTC PDD. This includes lands adjacent to Farley Road, Fitch Road and Sawmill Hill Road. Both of these zoning initiatives are in their early stages.

A listing of more recent projects receiving approvals or having been constructed is as follows: (The Chazen Companies, 2010).

C.) NATURAL HAZARD EVENT HISTORY SPECIFIC TO THE TOWN

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Blizzard	Not applicable	March, 1888	Not available
Flood	Not applicable	March, 1913	Not available
Extreme Cold	Not applicable	January, 1957	Not available
Snowstorm and Extreme Cold	Not applicable	February, 1961	\$81,000 (countywide)
Extreme Cold	Not applicable	January, 1968	Not available
Flood (Tropical Storm Agnes)	Not applicable	June, 1972	\$1,600,000 (countywide)

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Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood	Not applicable	March, 1977	Not available
Extreme Cold	Not applicable	February, 1979	Not available
Extreme Cold	Not applicable	December, 1980	Not available
Snowstorm	Not applicable	January, 1983	\$238,000 (countywide)
Snowstorm	Not applicable	April, 1983	\$238,000 (countywide)
Snowstorm	Not applicable	December, 1983	\$179,000 (countywide)
Snowstorm	Not applicable	February, 1984	\$238,000 (countywide)
Flood	Not applicable	May, 1984	\$2,400,000 (countywide)
Flood	Not applicable	March, 1986	\$1,400,000 (countywide)
Flood	Not applicable	August, 1986	\$505,000 (countywide)
Flood	Not applicable	April, 1987	\$2,100,000 property damage; \$208,000 crop damage; 3 injuries (countywide)
Severe Winter Storm	DR-801	October, 1987	Not available
Snowstorm	Not applicable	February, 1990	\$545,000 (countywide)
Freezing Rain	Not applicable	March, 1991	\$833,000 (countywide)
Blizzard and Extreme Cold	EM-3107	March, 1993	Not available
Extreme Cold	Not applicable	January, 1994	Not available
Snowstorm	Not applicable	February, 1995	\$500,000 (countywide)
Snowstorm	Not applicable	March, 1995	\$100,000 (countywide)
Severe Storm and Flooding	DR-1095	January, 1996	\$10,000,000 (countywide)
Flood	Not applicable	April, 1996	\$40,000 (countywide)
Severe Storms and Flooding	Not applicable	November, 1996	\$404,000 (countywide)
Snowstorm	Not applicable	March / April, 1997	\$709,000 (countywide)
Severe Winter Storm and Flooding	DR-1196	January, 1998	Between \$125,000 and \$745,000 (countywide)
Tornado (F3)		May, 1998	State of Emergency in Saratoga County; 55 homes were destroyed and 230 were damaged; \$60,000,000 in damages (all counties affected)
Flood	Not applicable	January, 1999	\$40,000 (townwide); Road closures
Severe Storms and Flooding (Hurricane Floyd)	DR-1295	September, 1999	Not available
Flood	Not applicable	February, 2000	\$63,000 (countywide)
Severe Storms	Not applicable	May/September, 2000	\$80,000 (countywide)
Thunderstorm / Wind	Not applicable	June, 2000	\$42,000 (townwide)
Flood	Not applicable	December, 2000	\$190,000 (countywide)
Snowstorm	Not applicable	March, 2001	Not available
Snowstorm	EM-3173	December 2002 / January 2003	Not available
Severe Storms, Tornado and	Not applicable	July / August 2003	Between \$100,000 and \$160,000



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Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flooding			(countywide)
Severe Storms and Flooding	DR-1534	May / June 2004	\$14,000,000 (statewide)
Severe Storms and Flooding	Not applicable	June/July, 2006	Power outages
Ice Storm	Not applicable	January, 2007	Power outages
Snowstorm (Valentine's Day Storm)	Not applicable	February, 2007	Not available

Number of FEMA Identified Repetitive Flood Loss Properties: 2

Number of FEMA Identified Severe Repetitive Flood Loss Properties: 0

Source: FEMA Region 2, November 2008

D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Rank #	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
4	Earthquake	\$31,584,863 ^{c,e}	Rare	11	Low
1	Flood (riverine, flash, coastal and urban flooding)	\$18,208,000 ^{c,e}	Frequent	54	High
3	Ground Failure	Not available ^f	Occasional	24	Medium
2	Severe Storm (windstorms, thunderstorms, hail, lightning and tornados)	\$652,229 ^{c,d}	Frequent	51	High
1	Severe Winter Storm (heavy snow, blizzards, ice storms)	\$17,122,950 ^{c,d}	Frequent	54	High

a. Building damage ratio estimates based on FEMA 386-2 (August 2001)

b. High = Total hazard priority risk ranking score of 31 and above

Medium = Total hazard priority risk ranking of 16-30

Low = Total hazard risk ranking below 15

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

d. Severe storm and severe winter storm hazard 500-year MRP loss estimate is structural value only; does not include the value of contents. For severe winter storm, the loss estimate is 5% of total general building stock value.

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

f. Approximately 90% of the Town's general building stock is located within the landslide hazard area, and thus vulnerable.

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)	Code Citation (Section, Paragraph, Page Number, date of adoption)
1) Building Code	Y	N	Y	Y	BCNYS 2007
2) Zoning Ordinance	Y	Y	Y	N	Zoning Law Local Law last amended 12/20/01
3) Subdivision Ordinance	Y	N	N	N	Subdivision Regulations last amended 3/3/2003
4) NFIP Flood Damage Prevention Ordinance (if you are in the NFIP, you must have this.)	Y	Y	Y	Y	Zoning Law, Article 12, Section 12.3
5) Growth Management	Y	Y	Y	N	Town Wide Generic Environmental Impact Statement adopted Feb 2009 that assesses impact fees on new development
6) Floodplain Management / Basin Plan	Y	Y	Y	N	Zoning Law, Article 12, Section 12.3
7) Stormwater Management Plan/Ordinance	Y	N	N	Y	Zoning Law, Article 8, Section 8.3 Subdivision Design Standards adopted 10/20/05
8) Comprehensive Plan / Master Plan/ General Plan	Y	N	N	N	Town Comprehensive Plan adopted 7/6/06 Town Wide Generic Environmental Impact Statement adopted Feb 2009 that assesses impact fees
9) Capital Improvements Plan	Y	N	N	N	Last updated in 2006 for Highway, Water & Sewer Dept.
10) Site Plan Review Requirements	Y	Y	Y	N	Zoning Law, Article 6
11) Open Space Plan	Y	N	N	N	Open Space and Farmland Protection Plan – part of Town Wide GEIS, adopted Feb 2009
12) Economic Development Plan	N	Y	Y	N	
13) Emergency Response Plan	Y	N	N	Y	Trying to find out info
14) Post Disaster Recovery Plan	Y	N	N	N	Trying to find out info
15) Post Disaster Recovery Ordinance	Y	N	N	N	Trying to find out info
16) Real Estate Disclosure req.	N	N	N	N	

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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)	Code Citation (Section, Paragraph, Page Number, date of adoption)
17) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	Y	Y	Y	N	Flood Mitigation Plan, Final Draft 2002 Pre-Disaster All Hazard Mitigation Plan, Final Draft 2002

E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Chazen Engineering
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Chazen Engineering
3) Planners or engineers with an understanding of natural hazards	Y	Chazen Engineering
4) NFIP Floodplain Administrator (if you are in the NFIP, you must have one.)	Y	Ray Abbey, Building Inspector / Code Enforcement Officer
5) Surveyor(s)	Y	Chazen Engineering
6) Personnel skilled or trained in "GIS" applications	Y	Chazen Engineering
7) Scientist familiar with natural hazards in the Town of Stillwater.	Y	Chazen Engineering
8) Emergency Manager	Y	
9) Grant Writer(s)	Y	Chazen Engineering
10) Staff with expertise or training in benefit/cost analysis	Y	Chazen Engineering

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	Yes
6) Incur debt through general obligation bonds	Yes
7) Incur debt through special tax bonds	Don't Know
8) Incur debt through private activity bonds	Don't Know
9) Withhold public expenditures in hazard-prone areas	Don't Know
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	Yes
11) Other	

E.4) Community Classifications

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

N/A = Not applicable. NP = Not participating. - = Unavailable.

The classifications listed above relate to the community's effectiveness in providing services that may impact its 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 <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/>

F.) PROPOSED HAZARD MITIGATION INITIATIVES

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
TST-0 SC-35	Schedule visits by FEMA to provide information to the community with special attention to RL properties on RR #67. This outreach will be supported by the Saratoga County Office of Emergency Services and implemented by the Town to support future applications for mitigation funding for RL properties.	New & Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipal Engineering (NFIP Floodplain Administrator)	NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	Short
TST-1	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements including regulating all new and substantially improved construction in Special Hazard Flood Areas, floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives 1a through 1f.	New & Existing	Flood, Severe Storm	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	Municipal Engineering (NFIP Floodplain Administrator)	NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	
TST-1a	Consider the adoption of higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial	New	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2		NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	damage/improvements).									
TST-1b	Develop and implement an enhanced public outreach/education/information program, including: (for example) develop a flood risk management webpage on the municipal website where information and mapping can be posted, include NFIP information in regular newsletter and mailings, etc....	N/A	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2		NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	
TST-1c	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	N/A	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2		NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	
TST-1d	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM, and consider relevant continuing education training such as FEMA Benefit-Cost Analysis.	N/A	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2		NYSEMO Saratoga County Office of Emergency Services	Low	Municipal Budget	
TST-1e	Continue to require and archive elevation certificates.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	Municipal Engineering (NFIP Floodplain Administrator)		Low	Municipal Budget	
TST-1f (SC-5)	Consider participation in the Community Rating System to further manage flood risk in the City and reduce flood insurance premiums for NFIP policyholders. This would include attendance at County sponsored NFIP-CRS information workshops during	New & Existing	Flood, Coastal Storm	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	Municipal Engineering (NFIP Floodplain Administrator)	NYSEMO Saratoga County Office of Emergency Services	Low	City Budget	

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	year one of the plan implementation period.									
TST-2a	Where appropriate, support retrofitting (e.g. elevation) 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	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipality (likely through NFIP Floodplain Administrator);	NYSEMO Saratoga County Office of Emergency Services	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	
TST-2b	Where appropriate, support acquisition 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 to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipality (likely through NFIP Floodplain Administrator),	NYSEMO Saratoga County Office of Emergency Services	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	
TST-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	1 through 5	All	Municipality (through mitigation planning point of contacts)	County (through Mitigation Planning Coordinator),	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation	Ongoing



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
							SEMO		Grant Funding for 5-year update	
TST-4	Expand public education on ways to protect property before and during hazard events. Conduct continued public and stakeholder outreach to promote awareness of this Plan and obtain ongoing public and stakeholder input. Specific activities shall include maintaining the public HMP website, media releases, maintaining copies of the plan in city hall, and may include public meetings, informational flyers, press releases, and public service announcements	New & Existing	All Hazards	1 through 5	All	Municipality (likely through NFIP Floodplain Administrator)	SEMO, ISO, FEMA	Low - Medium	Local Budget	Ongoing
TST-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Municipal Emergency Manager with support from County OEM and SEMO	County Emergency Management, SEMO	Low - Medium	Local Budget	Ongoing
TST-6	Create/enhance/ maintain mutual aid agreements with neighboring communities. Possible options listed in the Comprehensive Plan include the following: Conduct an Intermunicipal Cooperation Roundtable to promote intermunicipal coordination and	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Local Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	Communication Expand joint operations with the Sheriff's Office, State Police and Mechanicville Police to maximize results.									
TST-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	1 through 5	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing – Long-term depending on initiative
TST-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	Municipality	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	DOF
TST-9	Implement dam structure repairs as required by dam safety report/protocols	Existing	Flood	3	3-1, 3-3, 3-6	Municipality	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	DOF
TST-10	Support the Installation/Implementation of Community Emergency Alert System	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	Municipality	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	DOF
TST-11	Create a mitigation support fund to provide matching funds	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Municipality		Medium	Operating budget	Short

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	on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle									
TST-12	Develop a multi-year Capital Improvement Plan (CIP) to provide a long-term plan for infrastructure improvements.	New & Existing	All Hazards	1, 3	1-1, 1-6, 3-3, 3-6	Municipality		Low	Local budget	Ongoing
TST-13	Perform a comprehensive review and evaluation of Stillwater's planning and zoning regulations <i>(Per the Comprehensive Plan)</i>	Existing	All Hazards	1	1-4, 1-6, 1-7	Municipality		Low	Local budget	Ongoing
TST-14	Conduct Needs Assessment for each of the community service providers to ensure adequate facilities and services for residents (for example, emergency services, shelters) <i>(Per the Comprehensive Plan)</i>	Existing	All Hazards	1, 3	1-1, 1-4, 1-6, 3-4, 3-5, 3-6	Municipality		Low to Medium	Local budget	
TST-15	Use the Town's web site to better inform the public regarding the Fire/Police/EMS services <i>(Per the Comprehensive Plan)</i>	NA	All Hazards	1, 2	1-6, 2-2, 2-5	Municipality		Low to Medium	Local budget	Ongoing
TST-16	Work with the State, County, and local service providers to expand the delivery of fire safety/prevention programs <i>(Per the Comprehensive Plan)</i>	NA	All Hazards	1, 2	1-6, 2-2, 2-5	Municipality	County, NYS	Low to Medium	Local budget	
TST-17	Prepare/Update the Town stormwater management plan and focus on sub-basins	New & Existing	Flood, Severe Storm	1	1-4, 1-5, 1-6, 1-7	Municipality		Low to Medium	Local budget	Ongoing



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	where there is chronic flooding. (Per FMA).									
TST-18	Explore potential passive recreational uses of the Old Champlain Canal and towpath via a trail system or linear park. This proposed use would serve to provide additional open space and recreational amenities locally, and would minimize impervious surfaces and promote infiltration. Further, allowing land along the Old Champlain Canal to remain undeveloped would permit periodic access to the canal for routine maintenance activities to ensure that stormwater is being effectively and safely conveyed. (Per FMA)	Existing	Flood, Severe Storm	1, 4	1-5, 4-3, 4-4, 4-5	Municipality	Village of Stillwater & County & Regional Agencies (as appropriate for initiative)	Low to Medium to High	Dependant on initiatives	Long Term
TST-19	Form a committee and study the chronic flooding problem of ice jams on the Hudson River in the vicinity of the lower dam (lock C-3) and make recommendations on how to alleviate this problem. This Committee should involve the Town and Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency	New & Existing	Flood	1, 5	1-4, 1-6, 5-3	Municipality	Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management	Low		

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	Management Office and any other agencies and organizations with a stake in this issue. <i>(Per FMA)</i>						Office			
TST-20	Increase public education on flooding. Town and Village can hold a joint workshop on the causes of flooding, the availability of flood insurance and specific techniques for flood proofing property. This workshop could also focus on the value and function of wetlands as a whole, and specifically, their role in mitigating flooding. Further, the Town may wish to consider developing an educational brochure on flooding and its mitigation. Alternatively, such a topic could be incorporated within a Town newsletter. <i>(Per FMA)</i>	NA	Flood	1, 2	1-4, 1-6, 2-1, 2-2, 2-3, 2-4, 2-5	Municipality	Village of Stillwater	Low to Medium Dependant on initiative	FEMA HMA; local budget	Long Term
TST-21	Amend the Town zoning ordinance and Village site development law to: a) require stormwater analysis and mitigation for development and land clearing of a certain size, and b) to require erosion and sediment control. The latter has already been proposed in the draft update to the Town's zoning ordinance. <i>(Per FMA)</i>	New & Existing	Flood, Severe Storm	1, 4	1-6, 1-8, 4-2, 4-4	Municipality		Low	Local budget	Short Completed
TST-22	Undertake a feasibility study to examine the possibility of establishing a trail or linear park along the Old Champlain Canal. <i>(Per FMA)</i>	NA	NA	4	4-2, 4-3	Municipality	Village of Stillwater & County & Regional Agencies as	Low	Local budget	Medium



SECTION 9.26: TOWN OF STILLWATER

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
							appropriate			
TST-23	Incorporate engineering and maintenance items related to flood prevention and mitigation in capital improvements and budget planning. <i>(Per FMA)</i>	Existing	Flood	1	1-1, 1-6, 1-7	Municipality		Low	Local budget	On-going
TST-24	Charge the Stillwater Grants Committee with the task of securing funding to implement the recommendations of the FMA. <i>(Per FMA)</i>	Existing	Flood	1	1-7, 1-9	Municipality		Low	Local budget	Short Ongoing
TST-25	Pursue riverbank stabilization and erosion and sedimentation control projects at problem locations within the Hudson Riverfront Area. <i>(Per FMA)</i>	Existing	Flood	1, 4	1-1, 4-2	Municipality	NYS (if applicable)	Medium-High Dependant on initiative	FEMA HMA	Medium to Long
TST-26	Provide tributary stream channel and bank improvement projects at problem locations within the Hudson Riverfront Area. <i>(Per FMA)</i>	Existing	Flood	1, 4	1-1, 4-2	Municipality	NYS (if applicable) & Village of Stillwater	Medium-High Dependant on initiative	FEMA HMA	Medium to Long
TST-27	Conduct long-term inspection and maintenance programs within the Hudson Riverfront Area. <i>(Per FMA)</i>	Existing	Flood	1, 4	1-1, 1-4, 4-2	Municipality	NYS (if applicable)	Medium Dependant on initiative	FEMA HMA	Long Term
TST-28	Provide channel and embankment improvement projects for the Old Champlain Canal and Schuyler Creek to develop adequate and stable channel cross-sections to convey storm flows. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades,	Existing	Flood	1, 4	1-1, 4-2	Municipality	NYS (if applicable)	Medium-High Dependant on initiative	FEMA HMA	



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. <i>(Per FMA)</i>									
TST-29	Improve/upgrade and increase capacity of the storm sewer infrastructure on Lake Street and Park Avenue to convey floodwaters to Schuyler Creek. This is primarily located in the Village. <i>(Per FMA)</i>	Existing	Flood	1, 3	1-1, 3-6	Municipality	Village of Stillwater & Saratoga County DPW	Medium-High Dependant on initiative	FEMA HMA	Medium
TST-30	Evaluate the effect of the existing private wooden bridge on channel capacity and flooding. Remove or replace bridge to provide a greater channel cross-section if indicated by evaluation (NYS RT 67, Meadow Lane, Anthony Kill Area). <i>(Per FMA)</i>	Existing	Flood	1	1-1, 1-4, 1-5	Municipality		Medium-High Dependant on initiative	Local Budget	Long Term
TST-31	Provide stream channel improvement projects along the Anthony Kill in the Town of Stillwater. Projects should include construction of access ways, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization and sediment and erosion control measures. <i>(Per FMA)</i>	Existing	Flood	1, 4	1-1, 4-2	Municipality	NYS (if applicable)	Medium-High Dependant on initiative	FEMA HMA	Long Term
TST-32	Maintain and improve (increase conveyance) channel for the existing drainage ditch along its 2,500-foot length from Stratton Lane	Existing	Flood	1, 3	1-1, 3-6	Municipality	NYSDOT	Medium-High Dependant on initiative	FEMA HMA	Long Term

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	north to its confluence with the Hudson River, possibly in partnership with NYSDOT for capacity improvements to culvert crossing under NYS RTS 4 & 32. <i>(Per FMA)</i>									
TST-33	Provide channel maintenance and improvement projects for the Old Champlain Canal along its 5,200-foot length from Stratton Lane north to where it passes under RTS 4 & 32 through two large concrete box culvert Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures, reinforcement of banks to prevent overtopping and breaching. Planning for these drainage projects should be coordinated with plans for future recreational development of the Old Champlain Canal and parallel towpath, and wetlands preservation considerations. <i>(Per FMA)</i>	New & Existing	Flood	1, 4	1-1, 4-2	Municipality	NYSDOT	Medium-High Dependant on initiative	FEMA HMA	Long Term
TST-34	Provide lakeshore stabilization and erosion and sedimentation control projects at problem locations on Saratoga Lake. <i>(Per FMA)</i>	Existing	Flood	1, 4	1-1, 4-1, 4-2	Municipality	NYSDOT & Saratoga County Lake Protection District	Medium-High Dependant on initiative	FEMA HMA	Long Term



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
TST-35	Provide tributary stream channel and bank improvement projects at problem locations in the Saratoga Lake area. (Per FMA)	Existing	Flood	1, 4	1-1, 4-1, 4-2	Municipality	NYSDOT & Saratoga Lake Protection District	Medium-High Dependant on initiative	FEMA HMA	Long Term
TST-36	Provide channel improvements along the Old Champlain Canal drainage way just north of the railroad embankment in the Riverside area to control ice formation by eliminating standing water. (Per FMA)	Existing	Flood	1, 4	1-1, 4-1, 4-2	Municipality	NYSDOT	Medium-High Dependant on initiative	FEMA HMA	Completed
TST-37	Provide channel improvement projects for the Old Champlain Canal along its 5,800 feet from Halfway House Road south to its confluence with the Hudson River. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. (Per FMA)	Existing	Flood	1, 4	1-1, 4-1, 4-2	Municipality	Village fo Stillwater	Medium-High Dependant on initiative	FEMA HMA	Partially completed in 2005 as HMGP project # 1488-0002
TST-38	Evaluate installation of a culvert crossing River Road (NYS RTS 4 & 32) to convey overflow from the Old Champlain Canal to the Hudson River just north of the railroad embankment at the	Existing	Flood	1, 3	1-1, 3-6	Municipality		Medium-High Dependant on initiative	FEMA HMA	

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Objectives Met	Lead Agency	Support agencies	Estimated Cost	Sources of Funding	Timeline
	Iron Bridge. <i>(Per FMA)</i>									
TST-39	Evaluate installation of a culvert crossing under Burns Bridge Road, Towpath Road and Hudson Avenue (NYS RTS 4 & 32) directly to the Hudson River. The proposed culvert would convey stormwater flow from the southern end of the Gurba Subdivision drainage-way east to the river. A culvert in this location would also serve to relieve downstream flooding on Halfway House Road, Mitchell Road and in the Riverside Area. <i>(Per FMA)</i>	Existing	Flood	1, 3	1-1, 3-6	Municipality		Medium-High Dependant on initiative	FEMA HMA	

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.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure?



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.

Hazard of Concern	Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	TST-3, TST-4, TST-7, TST-11-16	TST-3, TST-7	TST-3, TST-7	TST-3, TST-7	TST-3, TST-5, TST-6, TST-7, TST-10	TST-3, TST-7
Flooding (riverine, flash, coastal and urban flooding)	TST-0, TST-2, TST-3, TST-4, TST-7, TST-8, TST-11-19, TST-21, TST-23, TST-24, TST-38, TST-39	TST-1, TST-2, TST-3, TST-4, TST-7, TST-25-26, TST-28-33, TST-36-37	TST-1, TST-2, TST-3, TST-4, TST-7	TST-3, TST-7, TST-25-28, TST-31, TST-33, TST-34-37	TST-2, TST-3, TST-5, TST-6, TST-7, TST-8, TST-10	TST-3, TST-7, TST-9
Ground Failure	TST-3, TST-4, TST-7, TST-11-16	TST-3, TST-7	TST-3, TST-7	TST-3, TST-7	TST-3, TST-5, TST-6, TST-7, TST-10	TST-3, TST-7
Severe Storms (windstorms, thunderstorms, hail, lightning and tornados)	TST-0, TST-2, TST-3, TST-4, TST-7, TST-11-8, TST-21	TST-1, TST-2, TST-3, TST-4, TST-7	TST-1, TST-2, TST-3, TST-4, TST-7	TST-3, TST-7	TST-2, TST-3, TST-5, TST-6, TST-7, TST-10	TST-3, TST-7
Severe Winter Storm (heavy snow, blizzards, ice storms)	TST-3, TST-4, TST-7, TST-11-16	TST-3, TST-7	TST-3, TST-7	TST-3, TST-7	TST-3, TST-5, TST-6, TST-7, TST-10	TST-3, TST-7

Notes:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

H.) PRIORITIZATION OF MITIGATION INITIATIVES

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)
TST-0	8	L	L	Y	N	Y	H
TST-1	8	M	M	Y	N	Y	M-H
TST-2	8	H	H	Y	N	N	M-H*
TST-3	28	M	M	Y	N (Yes for 5 year update)	Y	H
TST-4	35	L	L	Y	N	Y	H
TST-5	5	M	L	Y	N	Y	M
TST-6	35	M	L	Y	N	Y	H
TST-7	28	H	L-M	Y	Dependant on specific initiative	Dependant on specific initiative	M-H (dependant)
TST-8	6	M	M-L	Y	Y	Y (local match)	M
TST-9	3	M	M	Y	Y	Y (local match)	M
TST-10	6	M	M	Y	Y	Y (local match)	M
TST-11	6	M	M	Y	N	Y	H
TST-12	4	M	L	Y	N	Y	M
TST-13	3	L	L	Y	N	Y	M
TST-14	6	M	L-M	Y	N	Y (local match)	M
TST-15	3	M	L-M	Y	N	Y	M
TST-16	3	M	L-M	Y	N	Y	M
TST-17	4	M	L-M	Y	N	Y	M
TST-18	4	M	L-M	Y	Dependant on specific initiative	Dependant on specific initiative	M-H (dependant)
TST-19	3	L	L	Y	N	Y	M
TST-20	6	M	L-M	Y	Y	Y (local match)	M
TST-21	4	M	L	Y	N	Y	M
TST-22	2	L	L	Y	N	Y	M
TST-23	3	M	L	Y	Dependant on specific initiative	Dependant on specific initiative	M-H (dependant)
TST-24	2	M	L	Y	N	Y	M
TST-25	2	H	M-H	Y	Y	Y (local match)	M
TST-26	2	H	M-H	Y	Y	Y (local match)	M

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)
TST-27	3	M	M	Y	Y	Y (local match)	M
TST-28	2	H	M-H	Y	Y	Y (local match)	M
TST-29	2	H	M-H	Y	Y	Y (local match)	M
TST-30	3	M	M	Y	Y	Y (local match)	M
TST-31	2	M	M	Y	Y	Y (local match)	M
TST-32	2	M	M	Y	Y	Y (local match)	M
TST-33	2	M	M	Y	Y	Y (local match)	M
TST-34	3	M	M	Y	Y	Y (local match)	M
TST-35	3	M	M	Y	Y	Y (local match)	M
TST-36	3	M	M	Y	Y	Y (local match)	M
TST-37	3	M	M	Y	Y	Y (local match)	M
TST-38	2	M	M	Y	Y	Y (local match)	M
TST-39	2	M	M	Y	Y	Y (local match)	M

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 based 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 the 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

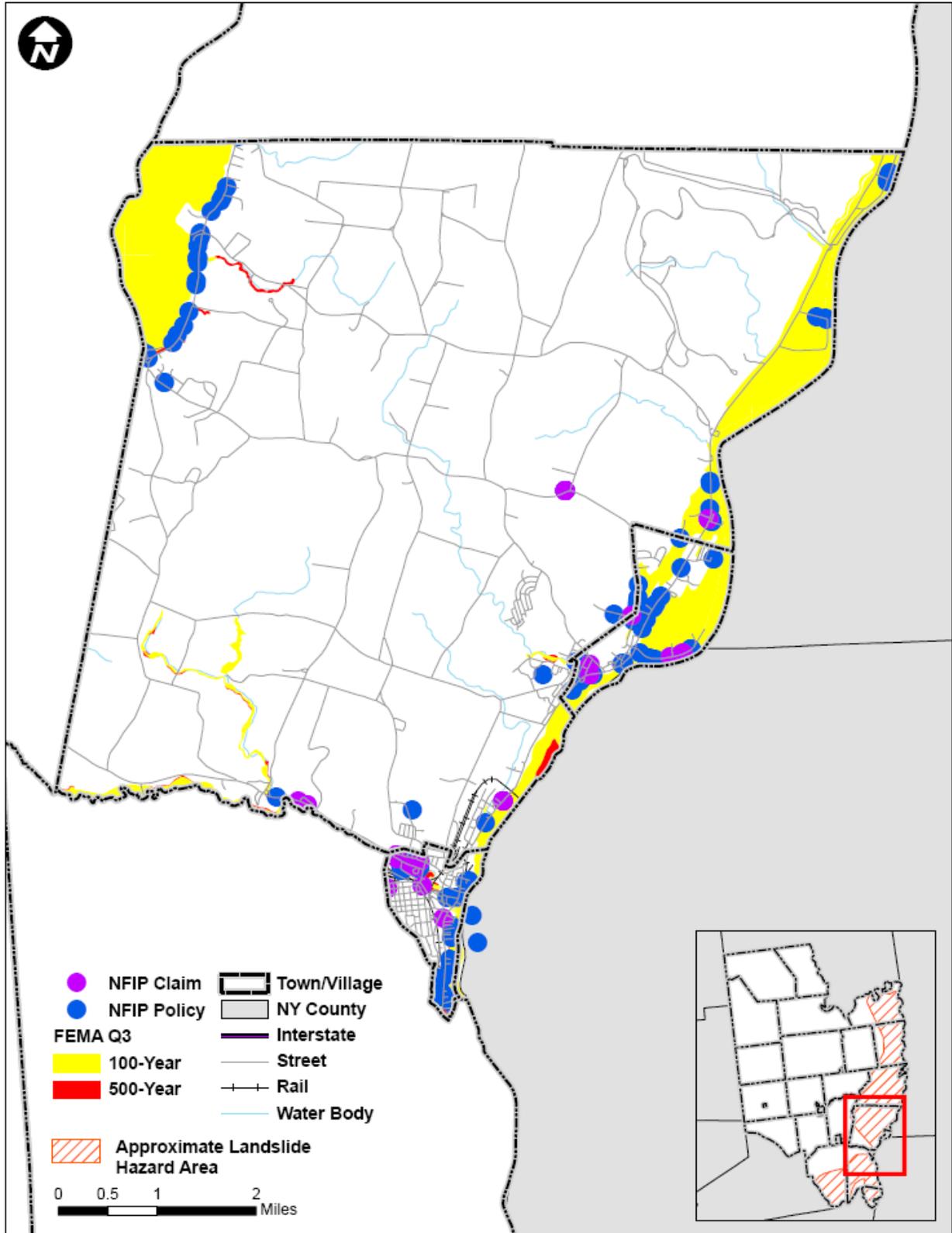
None at this time.

J.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated and is provided below for the Town of Stillwater 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 Stillwater has significant exposure. The County maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.

K.) ADDITIONAL COMMENTS

No additional comments at this time.



Sources: FEMA Q3; FEMA Region II, 2008; HAZUS-MH MR3; NYSDPC, 2008

Notes: NFIP = National Flood Insurance Program

The entire municipality is vulnerable to the following hazards: earthquake, severe storm, and severe winter storm.