

9.5 TOWN OF CHENANGO

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

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
Name: Hal Snopek Address: 1529 NY Route 12; Binghamton, NY 13901 Phone Number: (607) 648-4809 Ext. 6 Fax: N/A Email address: supervisor@townofchenango.com	Name: Alex Urda , Town Engineer Address: 1529 NY Route 12; Binghamton, NY 13901 Phone Number: (607) 655-3700 (607) 760-6545 – cell Fax: (607) 648-8511 Email address: alex@urdaengineering.com

B.) PROFILE

Population

11,252 (estimated 2010 U.S. Census)

Location

The Town of Chenango is located in the eastern part of Broome County, NY and is northeast of Binghamton. The Chenango River is the eastern town line. According to the U.S. Census Bureau, the town has a total area of 34.3 square miles, of which, 33.9 square miles is land and 0.3 square miles is water. Interstate 81, U.S. Route 11, and New York State Route 12 pass through the town.

Brief History

The town was first settled around 1787 and the Town of Chenango was established in 1791 before the formation of Broome County. It is one of the original towns of the county, from which other towns were later formed.

Governing Body Format

Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Villages generally have a Mayor, Clerk, and Council. Along with town and village roads, any public water and sewer systems are operated by the local municipality, though they may cooperate with County departments. Each municipality has charge over its own planning and zoning and uses the County personnel as a resource.

Growth/Development Trends

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) years in the municipality. Refer to the map in section I.) of this annex which illustrates the hazard areas along with the location of potential new development.

New Development/Potential Development in Municipality						
Property Name	Type (Residential or Commercial)	Number of Structures	Address	Block and Lot	Known Hazard Zone	Description/ Status
Northgate Plaza	Commercial	Mall	1250 Upper Front St		Flood	Existing
Phillips Property	Commercial		1555 NY Route 12			Pending
Corbi Lake	Residential	100	1562 NY Route 11		Flood	Pending

C.) NATURAL HAZARD EVENT HISTORY SINCE 2006

Broome County has a history of natural hazard events as detailed in Volume I, Section 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events affecting the County and its municipalities. Below is presented a summary of events dating from the year 2006 to indicate the range and impact of natural hazard events in this community. Specific damages have been indicated if available from reference or local sources. For details of events prior to 2006, refer to Volume I, Section 5 of this plan.

Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Severe Storms and Flooding	DR 1650	Yes – IA, PA	June 26 —July 10, 2006	Yes – The shelter at Chenango Fire Station was opened for evacuated residents. Numerous roads were closed for up to 2 days, and \$190,301 in infrastructure damages was recorded. Several homes in the Jacobs Highway area were flooded. The Town recorded a total \$35,615 in debris removal costs, and \$16,834 in emergency protective measures.
Severe Storms and Flooding	DR 1670	Yes – IA, PA	November 16-17, 2006	Yes – Residents from Fuller Road were evacuated, and utility service was unavailable on Dorman Rd., John Smith Rd., and Brookview Dr. for up to 3 weeks. Infrastructure damage totaled \$1,027,905, plus \$7,813 in public facility damages. 125 private homes reported damages during the event. \$120,26 in emergency services was provided for creek cleaning and debris removal.
April Nor'easter	DR 1692	No	April 14 - 18, 2007	No
Severe Storms and Flooding	DR 1710	No	June 19, 2007	No
Severe Winter Storm	EM 3299 DR 1827	No	December 11-31, 2008	No
Severe Storms and Flooding	DR 1857	No	August 8-10, 2009	No
Severe Storms, Flooding, Tornado and Straight Line Winds	DR 1993	Yes - PA	April 26 — May 8, 2011	Yes – Kelly Road was closed for approximately one week. Approximately \$105,293 in damages to culverts and ditch lines was recorded. \$6,322 was spent on emergency protective measures.
Hurricane Irene	EM 3328 DR 4020	Yes - IA, PA	August 26— September 5, 2011	No
Remnants of Tropical	EM 3341	Yes - IA, PA	September 7-11,	Yes – Several roads were under

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Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Storm Lee	DR 4031		2011	water, and several businesses closed due to flooding. Infrastructure damage, including two pump stations and numerous culverts, totaled \$159,745. Another \$30,847 in public facility/structural damages were recorded, as was \$137,805 in debris removal.
Flood	N/A	N/A	January 25, 2010	\$15,000 in EPM's

Note: N/A = Not applicable

D.) NATURAL 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
Flood	1% Annual Chance: \$11,068,335 0.2% Annual Chance: \$26,994,492	Frequent	36	High
Severe Winter Storm	1% of GBS: \$11,673,976 5% of GBS: \$58,369,880	Frequent	39	High
Severe Storm	100-Year MRP: \$0 500-Year MRP: \$282,011 Annualized Loss: \$3,381	Frequent	30	Medium
Earthquake	500-Year MRP: \$306,876 2,500-Year MRP: \$3,732,088 Annualized Loss: \$3,649	Occasional	20	Medium
Drought	Not available	Frequent	18	Low
Extreme Temperature	Not available	Frequent	18	Low

- 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 20-30
Low = Total hazard risk ranking below 20
- c. The valuation of general building stock and loss estimates was based on custom inventory for Broome County.
- d. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- e. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- f. The HAZUS-MH earthquake model results are reported by Census Tract.

E.) CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community resiliency
- Community political capability
- Community classification.

The town indicates that it has high planning and regulatory, and administrative and technical capability, and moderate fiscal, community resiliency, and community political capabilities. The town also indicates that it has a moderately willing political capability to enact policies or programs to reduce hazard vulnerabilities in the community.

E.1) Legal and Regulatory Capability

Regulatory Tools (Codes, Ordinances., Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of adoption)
1) Building Code	Y	Local	Chap. 3, 5/2/77
2) Zoning Ordinance	Y	Local	Chap. 73, 1/7/78
3) Subdivision Ordinance	Y	Local	Chap. 62, 2/3/86
4) NFIP Flood Damage Prevention Ordinance	Y	Local	Chap. 39, 3/26/87
4a) Cumulative Substantial Damages	Y	Local	Chap. 39, 3/26/87
4b) Freeboard	Y	Local	Chap. 39, 3/26/87
5) Growth Management	Y	Local	Chap. 62, 2/3/86
6) Floodplain Management / Basin Plan	Y	Local or Watershed	Chap. 39, 3/26/87
7) Stormwater Management Plan/Ordinance	Y	Local	Chap. 57b, 5/7/07
8) Comprehensive Plan / Master Plan/ General Plan	Y	Local	11/05 – Updating in 2012-2013
9) Capital Improvements Plan	Y	Local or County	
10) Site Plan Review Requirements	Y	Local	Chap. 15-2 & Chap. 73-28, 1/7/78
11) Open Space Plan	N	Local or County	
12) Stream Corridor Management Plan	Y	Local or Watershed	Chapter 57B & Chap. 39, 5/7/07
13) Watershed Management or Protection Plan	Y	Local or Watershed	Chap 73-11, 7/18/83
14) Economic Development Plan	N	County	
15) Comprehensive Emergency Management Plan	Y	Local or County	6/13/07
16) Emergency Response Plan	Y	Local or County	6/13/07
17) Post Disaster Recovery Plan	Y	Local	6/13/07
18) Post Disaster Recovery Ordinance	N	Local	
19) Real Estate Disclosure Requirement	Y	State	State Requirement
20) Other [Special Purpose Ordinances (i.e., critical or sensitive areas) Environmental	Y	Local or County	Chap. 35, 2/27/84

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Regulatory Tools (Codes, Ordinances., Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of adoption)
Quality Review			
Excavations	Y		Chap. 36, 5/2/77



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	Ordinance
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Ordinance
3) Planners or engineers with an understanding of natural hazards	Y	Ordinance/Highway
4) NFIP Floodplain Administrator	Y	Ordinance/Code Enforcement- Tom Geisenhof
5) Surveyor(s)	N	
6) Personnel skilled or trained in "GIS" applications	Y	Ordinance – Beginning to work with applications
7) Scientist familiar with natural hazards	N	
8) Emergency Manager	N	
9) Grant Writer(s)	N	
10) Staff with expertise or training in benefit/cost analysis	N	

E.3) Fiscal Capability

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

E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	10	
Building Code Effectiveness Grading Schedule (BCEGS)	NP	
Public Protection	NP	
Storm Ready	NP	
Firewise	NP	

N/A = Not applicable. NP = Not participating. - = 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 <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. MITIGATION STRATEGY

F.1) Past Mitigation Actions/Status

Based on recommendations listed in the 2007 Hazard Mitigation Plan, the town has incorporated the following actions into its planning and land use mechanisms:

- Instated a town Stormwater Management Officer
- In-depth reviews for construction projects
- Castle Creek Civic Association is being rebuilt on higher ground.
- Ongoing cleaning of retention ponds above Clarendon Drive.
- Town has updated Disaster Emergency Preparedness Plan

Other planned and ongoing mitigation projects and activities include obtaining records of the elevation of new or planned structures, implementing drainage improvements, planning of new stormwater collection systems, and Town codes.

Completed actions include:

- Obtaining funding to purchase mobile backup generators to aid in supplying water and to assure flows in storm sewer mains.
- Considered non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss properties, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative were: funding, benefits versus costs and willing participation of property owners.

Ongoing actions include:

- The Castle Creek Civic Association is being torn down and a new facility is being constructed outside of the flood zone, it was damaged in the 2011 Flood.
- Research funding opportunities for back-up power support at disaster response command center for Town Hall.
- Codes will be enforced for new development in flood zones (Corbi Lake).
- Preparing to join CRS.
- Support citizens who desire to participate in FEMA acquisition or elevation programs.

The progress of mitigation actions from the 2007 Hazards Mitigation plan is indicated in Section F.3. Actions that are in not yet complete or are ongoing have been carried over to this plan update.

F.2) Hazard Vulnerabilities Identified

Identified hazard problems include weather-related incidents such as flood, ice, and wind. The properties from Wallace Road to Smith Road were identified as hazard areas where the Town has suffered damages/losses to natural hazards.

It is estimated that in the Town of Chenango, 3,233 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 5.4% is located within the 1% annual chance flood area. \$89,031,744 (4.4%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

Further information regarding the community’s participation in the NFIP is provided below.

NFIP Summary

There are 147 NFIP policies in the community and there are 47 policies located within the 1% annual chance flood area. FEMA has identified 6 Repetitive Loss (RL) including 0 Severe Repetitive Loss (SRL) properties in the municipality.

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% area Boundary (3)	# Policies in 0.2% Flood Event Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Chenango (T)	147	81	\$1,993,754	6	0	47	17	83

Source:

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, in April 2012 using the “Comm_Name”. These statistics are current as of January 31, 2012. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.
- (2) Total building and content losses from the claims file provided by FEMA Region 2 (current as of January 31, 2012).
- (3) The policy locations used are based on the latitude and longitude provided by FEMA Region 2.



HAZUS-MH estimates that for a 1% annual chance flood, \$11,068,335 (0.6%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 727 people may be displaced, 539 people may seek short-term sheltering, and an estimated 6,773 tons of debris could be generated. HAZUS-MH estimates the following damage and loss of use to critical facilities in the community as a result of a 1% annual chance flood event:

Name	Municipality	Type	Exposure		Potential Loss from 1% Flood Event			Potential Loss from 0.2% Flood Event		
			1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽¹⁾	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽¹⁾
			Kattelville Athletic	Chenango (T)	Poll		X	-	-	NA
NORTHGATE WELL	Chenango (T)	Potable Water	X	X	1.7	-	NA	12.0	-	NA
PENNVIEW WELL	Chenango (T)	Potable Water	X	X	0.9	-	NA	4.6	-	NA
ROUTE 12A WELL	Chenango (T)	Potable Water	X	X	40.0	-	NA	40.0	-	NA
Northgate WWTP	Chenango (T)	WWTF		X	-	-	NA	1.8	-	NA

Source: HAZUS-MH 2.1

Note: NA = Not available; T = Town

- = No loss calculated by HAZUS-MH 2.1

X = Facility located within the DFIRM boundary.

(1) HAZUS-MH 2.1 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).

Please note 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.

Please refer to the Hazard Profiles for additional vulnerability information relevant to this jurisdiction.

F.3) PROPOSED HAZARD MITIGATION INITIATIVES

Note some of the identified mitigation initiatives in the table below 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.

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2007 Action Status
1	Wallace Road storm sewer installation - A storm sewer system will be installed connecting the upper portion of Wallace Rd with the State's storm system on US Route 11. Several catch basins will also be installed along the system. This storm system will alleviate flooding from the unnamed creek that flows between Wallace Rd and Smith Hill Rd. Numerous homes have been flooded both during the 2006 flood and the 2011 flood. This will help protect the same homes from repetitive flooding.											
	Please see above.	New	Flood	1-1 1-11	Town of Chenango; BC Highway, NYS DOT	High	High	Grant funding with local cost share	Short Term DOF	High	SP	
2	Detention pond cleanup and discharge swale from the ponds above Clarendon Drive.	Existing	Flood	1-1 1-11	Town of Chenango (Highway dept)	High	High	Grant funding with local cost share	Short Term DOF	Medium	NR	
3	Trash rack construction - A trash rack in the wooded area above Wallace Rd. It will collect storm debris from entering into the residential section of the creek and creating a dam there. Several homes will be protected from repetitive flood damage.	New and Existing	Flood	1-1 1-7	Town of Chenango Highway	High	Medium	Grant funding with local cost share	Short Term DOF	Medium	SP	
4	Chenango Bridge Pump station feasibility study	Existing	Flood	1-3 1-10	Town of Chenango DPW	Low	Low	Grant funding with local cost share	Long Term DOF	Medium	PP, PR	
5	Periodically review and update Town Disaster Plan.	N/A	All	4-2 4-4 4-5	Town of Chenango Town Board	Medium	Low	Municipal Budget	On-going	Medium	PP	Ongoing
6	Create and maintain a command center for disaster response at Town Hall. Center will have dedicated	N/A	All	1-1 4-5 4-6	Town of Chenango Town Board	High	High	Funding opportunities are still being researched	DOF	Medium	ES	In Progress



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2007 Action Status
	communications, back up power, and all necessary support services.							for backup power source				
7	As part of ongoing update to town Disaster Response Plan, evaluate alternative ingress/egress routes for critical town facilities to ensure access during flood events.	N/A	Flood	4-2 4-5	Town of Chenango Highway Dept , Broome County DPW, NYS DOT	High	Medium	Municipal Budget	On-going	High	ES	No Progress
8	Continue training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).	N/A	All	4-1 4-3 4-8	Town of Chenango Highway DPW, Town Board FEMA	High	Low	Municipal Budget	On-going	Medium	ES	Ongoing
9	Prepare and make available a simple pamphlet detailing pertinent information for new residents or anyone interested in learning more about natural hazards that may affect Town residents.	NA	All	1-1 2-1 2-6	Town of Chenango Hazard Mitigation Chair	High	Low	Municipal Budget	On-Going	Medium	PE	No Progress
10	Hold public information meetings, as appropriate, to educate the public on potential hazards and impacts.	NA	All	1-1 2-1 2-6	Town of Chenango Town Board	High	Low	Municipal Budget	On-going	Medium	PE	No Progress
11	Pursue various options to purchase a generator to maintain power to the town hall and to maintain radio contact and operability in the event of a long term power outage.	Existing	All	1-1 4-3 4-5	Town of Chenango Town Board	High	High	Federal, State, County, HLS grant opportunities	On-going	High	ES	On Funding options continue to be explored going.
	8. Obtain funding to purchase mobile backup generators to aid in supplying water and to assure flows in storm											Completed



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2007 Action Status
	sewer mains.											
12	Assist in the update of flood plain (FIRM) maps – Jurisdictional Level. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC and USGS; and identification of flood-prone areas outside of currently designated areas	N/A	Flood	1-1 1-3 2-3	FEMA, Town of Chenango Ordinance Dept and Planning Board	High	High	Municipal Budget	On-going	Medium	PR	Ongoing
13	Continue participation in the National Flood Insurance Program (NFIP) and begin process of joining CRS.	N/A	Flood	1-2 1-7 2-1	FEMA, Town of Chenango Town Board	High	Low	Municipal Budget	On-going	High	PR	Ongoing
	11. Perform a feasibility study to identify the best alternative to mitigate vulnerable critical facilities/infrastructure exposed to the flood hazard including analyzing the Castle Creek Civic Association building and the Chenango Bridge pump station.											The Castle Creek Civic Association is being torn down and a new facility is being constructed outside of the flood zone, it was damaged in the 2011 Flood.
14	Annually inspect all town culverts for signs of erosion or blockage. Pipe/culvert replacement on an as needed basis.	Existing	Flood	1-1 1-4	Town of Chenango Highway Dept	High	Medium	Municipal Budget	On-going	High	PP, PR	Ongoing
15	Chenango will continue to identify drainage system enhancement needs through its capital facilities program. Grants will be pursued for those capital projects that meet	New	Flood	1-1 1-5	Town of Chenango Highway Dept	High	High	Grant funding with local cost share	On-going	Medium	PP, PR	Ongoing



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	federal/state grant eligibility requirements.											
16	Continue to review trees and branches on an annual basis. Continue to work with NYSEG to top trees and hire contractors to remove other trees on an as needed basis.	N/A	Severe Storm	3-1 4-2	Town of Chenango Highway Dept NYSEG	Medium	Low	Municipal Budget, NYSEG	On-going	Medium	PP, PR	Ongoing
	15. The Town of Chenango will continue to explore safe and effective measures to break up ice rafts prior to them creating a water back flow.										PP, PR	Discontinued
	16. Consider non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss properties, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners.											Completed
17	Structural elevations for private residences in the Broad Acres, Front Street, and Chenango Bridge areas of Chenango	Existing	Flooding	1-1 1-2	Town of Chenango Town Board	High	High	FEMA, ICC, local cost share	Long Term	Medium	PP	
Flood-1	Purchase, relocate, or elevate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Broad Acres, Front Street, and Chenango Bridge areas and Route 12. (look at alternatives to flood proof). Phase 1: Identify appropriate candidates for relocation or elevation based on cost-effectiveness versus retrofitting. Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from											



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	FEMA and local match availability.											
	See above.	Existing	Flood, Severe Storm	1-1 1-2 2-1 2-2 3-2	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from BCPD, NYSOEM, FEMA	High	High	FEMA Mitigation Grants	Long Term DOF		PP	
Flood-2	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. 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 below.											
		N/A	Flood, Severe Storm	1-1 1-2 1-4 1-5 1-6 1-7 2-1 2-2 3-2	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	High	Low-Medium	Municipal Budget	On-going	Medium	PP, PR	
Flood-3	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: <ul style="list-style-type: none"> • Provide information on acquisitions/FEMA HMGP program on Town website and provide a letter of intent form to be completed and forwarded to Town for further action on behalf of homeowners. • Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. • Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. • Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.											
	See above.	N/A	All Hazards, Or Flood	1-2 1-7 1-9 2-1 2-2 3-2 3-4 4-6	Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	Medium	Medium	Municipal Budget, HMA programs with local or county match	Short Term	High	PR, PE	
Flood-4	Obtain and archive elevation certificates	N/A	Flood, Severe Storm	1-1 1-2 1-4	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	On-going		PE	



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				1-5 4-1								
Flood-5	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New and Existing	All Hazards	All Goals and Objectives	Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	High	Low – High (for 5 year update)	Municipal Budget, FEMA planning grants	On-going	High	PR	
Flood-6	Complete ongoing updates of Disaster Emergency Management Plan	New and Existing	All Hazards	1-1 1-10 4-2	Municipality with support from NYSOEM	Low	Low	Municipal Budget	On-going	High	PP, PR	
Flood-7	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	N/A	All Hazards	3-1 3-3 4-5	Municipality with support from County, NYSOEM, FEMA and surrounding communities	Medium	Low	Municipal Budget	Short Term	High	PP, PR	
Flood-8	Identify and develop agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping	N/A	All Hazards	1-4 1-5 2-2 3-1 4-1	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short Term	High	PR, ES	
Flood-9	Work with regional agencies (i.e. County and SOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain	N/A	All Hazards	1-5 2-2 2-3 3-1 4-1 4-3	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget, FEMA HMA and HLS grant programs	Short-Long Term DOF	Medium	PR, ES	



SECTION 9.5: TOWN OF CHENANGO

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2007 Action Status
	managers, engineers).											
Flood-10	Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including: <ul style="list-style-type: none"> Support the performance of enhanced risk and vulnerability assessments for hazards of concern. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level. Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program. "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24 hour Warning Point, increase number of ways EOC receives NWS warnings, increase number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, train weather spotters, create a formal hazardous weather plan, host annual visits by NWS to communities, etc.											
	See above.	N/A	All Hazards	1-1 1-3 1-8 2-2 3-1 4-1	Hazard Mitigation Plan Coordinator	Medium-High	Medium-High	FEMA Mitigation Grant Programs with local match	Long Term DOF	Medium	PR	
Severe Storm-1	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program. "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24 hour Warning Point, increase number of ways EOC receives NWS warnings, increase number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, train weather spotters, create a formal hazardous weather plan, host annual visits by NWS to communities, etc.											
	Please see above.	N/A	Severe Storm	1-1 1-2 2-1 2-2 2-6	Municipality with support from County, NYSOEM and FEMA	Medium	Low	Municipal Budget	Short Term DOF	Medium	PR	
Earthquake-1	Obtain training and conduct rapid screening assessment of critical facilities for earthquake vulnerability.	N/A	Earthquake	1-1 4-2 4-3	Municipal Emergency Management, Fire, PD with support from County, NYSOEM	Medium	Medium	Municipal Budget, State and County grant opportunities	Long Term DOF	Medium	PE	
Earthquake-2	Develop a post-earthquake management	N/A	Earthquake	1-11 4-5	Municipal Emergency	Medium	Medium	Municipal Budget,	Long Term	Low	PR, ES	



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2007 Action Status
	plan to address building safety inspections, gas leaks, and other elements to protect public safety.			4-6	Management, Fire, PD with support from County, NYSOEM			State and County grant opportunities	DOF			

Notes:

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

Acronyms

- ARC American Red Cross
- BCDSS Broome County Department of Social Services
- BCOES Broome County Office of Emergency Services
- BCPD Broome County Planning Department and Economic Development
- BHA Binghamton Housing Authority
- DPW Department of Public Works
- FEMA Federal Emergency Management Agency
- HUD New York Department of Housing and Urban Development
- NFIP National Flood Insurance Program
- NYSDEC New York State Department of Environmental Conservation
- NYSDOT New York State Department of Transportation
- NYSEG New York State Electric and Gas
- NYSFSMA New York State Floodplain and Stormwater Managers Association
- NYSOEM New York State Office of Emergency Management
- USACE United States Army Corp of Engineers
- USGS United States Geological Survey

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.

Potential FEMA HMA Funding Sources:

PDM = Pre-Disaster Mitigation Grant Program

FMA = Flood Mitigation Assistance Grant Program

RFC = Repetitive Flood Claims Grant Program

SRL = Severe Repetitive Loss Grant Program

HMGP = Hazard Mitigation Grant Program

Timeline:

Short = 1 to 5 years. Long Term= 5 years or greater. OG = On-going program.

DOF = Depending on funding.

Notes (for Mitigation Type):

1. PR=Prevention: Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built Examples of these are acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
2. PP= Property Protection: These actions also 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 planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
3. PE=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. NR=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. SP=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.
6. ES=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.

G.) 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)
1	2	H	H	Y	Y	N	H
2	2	H	H	Y	Y	N	M
3	2	H	M	Y	Y	N	M
4	2	L	L	Y	Y	N	M
5	3	M	L	Y	N	Y	M
6	3	H	H	Y	Y	N	M
7	2	H	M	Y	N	Y	H
8	3	H	L	Y	N	Y	M
9	3	H	L	Y	N	Y	M
10	3	H	L	Y	N	Y	M
11	3	H	H	Y	Y	N	H
12	3	H	H	Y	N	Y	M
13	3	H	L	Y	N	Y	H
14	2	H	M	Y	N	Y	H
15	2	H	H	Y	Y	N	M
16	2	M	L	Y	N	Y	M
17	2	H	H	Y	Y	N	M
Flood 1	5	H	H	Y	Y	N	M
Flood 2	9	H	M	Y	N	Y	H
Flood 3	8	M	M	Y	Y	Y	M
Flood 4	5	M	L	Y	N	Y	H
Flood 5	ALL	H	H	Y	Y	Y	H
Flood 6	3	L	L	Y	N	Y	H
Flood 7	2	L	L	Y	N	Y	H
Flood 8	5	M	M	Y	N	Y	M
Flood 9	6	M	M	Y	Y	Y	M
Flood 10	6	M	M	Y	Y	N	M
Sever Storm	5	M	L	Y	N	Y	M
Earthquake 1	3	M	M	Y	N	Y	L
Earthquake 2	3	M	M	Y	N	Y	L

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

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

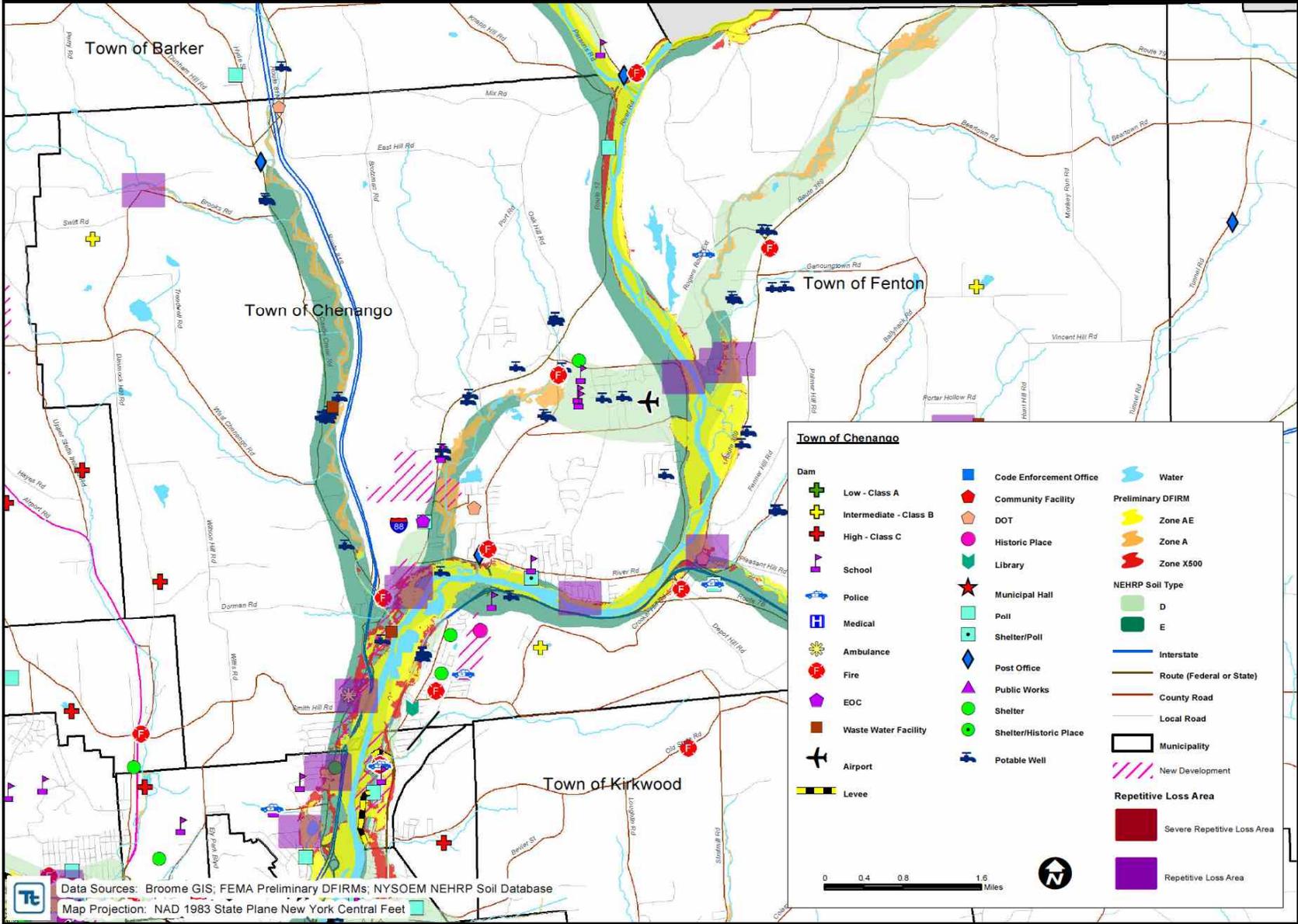
Prioritization of initiatives was based on parameters other than stated above: Not applicable.

H.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

None at this time.

I.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated for the Town of Chenango to illustrate the probable areas impacted within the Town of Chenango and is provided on the next page. 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 Chenango has significant exposure. The Planning Area maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.



J.) STATUS OF INCORPORATION OF MITIGATION PLANNING INTO EXISTING AND FUTURE PLANNING MECHANISMS

It is the intention of this municipality to incorporate mitigation planning as an integral component of daily municipal operations. Below is a list of planning mechanisms that have been/will be incorporated into municipal procedures.

(Check which apply and add explanation if required)

Planning Mechanisms	Has Been Utilized	Will Be Utilized
Operating Budget When constructing upcoming budgets, Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.	X	X
Capital Improvement Budget When constructing upcoming budgets, Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.		X
Human Resource Manual Employee job descriptions may contain Hazard Mitigation Actions.	X	X
Building and Zoning Ordinances A variety of building and zoning regulations are used to restrict the uses of land and establish building specifications. Prior to land use, zoning changes or development permitting the town will review the hazard mitigation plan and other hazard analysis to ensure consistent and compatible land use.	X	X
Comprehensive Land Use Plan A land use plan is intended to identify land use issues and to make recommendations on how to address these issues. When applicable the town will incorporate Hazard Mitigation Actions in the development and extent of the regulations.	X	X
Grant Applications Data and maps will be used as supporting documentation in grant applications	X	X
Municipal Ordinances When updating municipal ordinances Hazard Mitigation will be a priority.	X	X
Fire Plan The Hazard Mitigation Plan will be used as a resource for the development of future Fire Plans.		X
Capital Improvement Planning The municipality will establish a protocol to review current and future projects for hazard vulnerability. The will incorporate hazard resistant construction standards into the design and location of projects.		X
Day to Day Operations Incorporate Hazard Mitigation Actions in daily operations and all projects will be a goal of the municipality.	X	X
Local School Service Projects The municipality to work closely with the local school district and assist with community service projects for the service organizations. Several of the town's Hazard Mitigation Actions can be implemented as a joint project with the school district.		X
Municipal Budget- Adopted annually Municipality will look at Mitigation Actions when allocating funding.	X	X
Economic Development- The local economic development group will utilize the identification of hazard areas when assisting new business in finding a location.		X

K.) ADDITIONAL COMMENTS

No additional comments at this time.

NFIP ADMINISTRATOR INPUT SHEET

1. Planning and Regulatory

The Town of Chenango joined the NFIP on 3/26/87 and is currently an active member of the NFIP. Flood Insurance Rate Maps have been in effect for the community since August of 1981. Town of Chenango is proactive in floodplain management with ordinances meeting requirements. Town of Chenango has not completed Community Assistance Visits (CAV). As of December 2012 there is no need for a CAV. *Town of Chenango* has no outstanding compliance issues.

2. Administrative and Technical Staff

Town of Chenango has identified personnel to manage and uphold the *Town of Chenango's* compliance with the NFIP. Dedicated staff include: Floodplain Manager, Storm Water Manager; Tom Geisenhof. In addition, *Town of Chenango* has supplementary staff for which NFIP is an auxiliary duty; personnel include Code Enforcement Officer. Staff members (both dedicated and supplementary) complete numerous tasks in order for *Town of Chenango* to be in compliance of NFIP standards. Tasks include building inspections, flood prevention measures during constructions, control of fill and dredge activities.

3. Financial

As of December 27, 2012 there are 147 policies enforced within *Town of Chenango*. Of the 147 insurance policies, 64 are within the Special Flood Hazard Area (SFHA), and 83 are located outside the SFHA. Repetitive loss insurance claims have been reported in several areas within *Town of Chenango* including the Broad Acres area. As of December 27, 2012 there have been 6 repetitive loss properties and 0 severe repetitive loss properties within *Town of Chenango*.

4. Educational

Town of Chenango conducts numerous educational and/or outreach activities related to the NFIP. Activities include flood safe building practices and availability of flood insurance.

5. Actions to Strengthen the Program

Town of Chenango has taken numerous steps to strengthen the NFIP program and its administration. Actions include conducting surveys about residential flooding concerns.