

## 9.22 TOWN OF VESTAL

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

### A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
Name: Gary Campo, Town Engineer Address: 133 Front Street, Vestal, NY 13850 Phone Number: 607-786-980 ext 209 Fax: 607-786-0984 Email address: gwcampo@vestalnv.com	Name: Mark Dedrick, Code Enforcement Officer Address: 133 Front Street, Vestal, NY 13850 Phone Number: 607-786-0980 ext 212 Fax: 607-786-0984 Email address: mdedrick@vestalnv.com

### B.) PROFILE

#### Population

28,043 (estimated 2010 U.S. Census)

#### Location

The Town of Vestal is located in Broome County, NY. The town lies between the Susquehanna River and the Pennsylvania border. The north town line is defined by the Susquehanna River, the west is bordered by Tioga County, and the south is bordered by Susquehanna County, PA. According to the U.S. Census Bureau, the town has a total area of 52.7 square miles, of which, 52.2 square miles is land and 0.5 is water.

#### Brief History

The Town of Vestal was originally part of the township of Union and the first settlers of the town arrived around 1785. The town was formally established in 1823 from the southern half of the Town of Union. Lumbering was the leading industry in the town in the 1840s and 1850s which contributed to its growth and success. During the 20<sup>th</sup> century, Vestal served as a residential suburb to emerging industries such as Endicott Johnson Corporation, IBM, and Lockheed Martin.

#### 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
Vestal Nursing Home	Commercial	1	West Sheedy Road	189.12-1-41.2	Flood	Building will be outside flood zone. Presently in planning stages. Review process starting January 2013.

### 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	The Castle Gardens area was evacuated. Flooding was reported in the Town Hall/Police building basement The event resulted in \$510,000 worth of projects.
Severe Storms and Flooding	DR 1670	Yes - IA, PA	November 16-17, 2006	Numerous road closures occurred due to flooding. The event resulted in \$960,000 worth of projects.
April Nor'easter	DR 1692	No	April 14 - 18, 2007	N/A
Severe Storms and Flooding	DR 1710	No	June 19, 2007	N/A
Severe Winter Storm	EM 3299 DR 1827	No	December 11-31, 2008	N/A
Severe Storms and Flooding	DR 1857	No	August 8-10, 2009	N/A
Severe Winter Storm and Snowstorm	DR 1957	No	December 26-27, 2011	N/A
Severe Storms, Flooding, Tornado and Straight Line Winds	DR 1993	Yes - PA	April 26 — May 8, 2011	A large rain event caused road closures and utilities outages, though only a limited area was affected. The event resulted in \$324,000 worth of projects.
Hurricane Irene	EM 3328 DR 4020	Yes - IA, PA	August 26 — September 5, 2011	N/A
Remnants of	EM 3341	Yes - IA, PA	September 7-11,	3 or 4 neighborhoods were evacuated,

Type of Event	FEMA Disaster # (if applicable)	County Designated ?	Date	Approximate Damage Assessment
Tropical Storm Lee	DR 4031		2011	and no injuries were reported. Road closures and utilities outages affected an unlimited area. 1,200 homes and business were affected in some way by the storm. Other Losses included emergency protective services and costs for cleanup and debris removal. The event resulted in 6 million dollar worth of projects.
Severe storm	N/A	N/A	January 25,2010	A large rain event in short time period resulted in \$358,000 worth of road damage, much of which was in the area of Choconut Creek. There were also significant damages incurred to private properties, though the amount is unknown. Infrastructure damages/repairs were funded by the Town of Vestal.

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 <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Flood	1% Annual Chance: \$184,649,136 0.2% Annual Chance: \$243,799,365	Frequent	27	Medium
Severe Winter Storm	1% of GBS: \$27,027,780 5% of GBS: \$135,138,902	Frequent	39	High
Severe Storm	100-Year MRP: \$0 500-Year MRP: \$1,027,718 Annualized Loss: \$7,609	Frequent	30	Medium
Earthquake	500-Year MRP: \$695,825 2,500-Year MRP: \$8,654,814 Annualized Loss: \$8,396	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, regulatory, administrative, and technical capability and community resiliency; and moderate fiscal and community political capability; with a very 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	State Building Code, 2010
2) Zoning Ordinance	Y	Local	Vestal Town Code, 1966
3) Subdivision Ordinance	Y	Local	Vestal Town Code Appendix A, 8/15/06
4) NFIP Flood Damage Prevention Ordinance	Y	Local	Vestal Town Code Sec 6 / Article IV, 1987
4a) Cumulative Substantial Damages	N	Local	
4b) Freeboard	Y	Local	Vestal Town Code Sec 6- 137(d), 1987
5) Growth Management	N	Local	
6) Floodplain Management / Basin Plan	N	Local	
7) Stormwater Management Plan/Ordinance	Y	Local	Vestal Town Code Sec 6 Article VI, 2007
8) Comprehensive Plan / Master Plan/ General Plan	N	Local	
9) Capital Improvements Plan	N	Local	
10) Site Plan Review Requirements	Y	Local	Vestal Town Code Sec 24-84, 1966
11) Open Space Plan	N	Local or County	
12) Stream Corridor Management Plan	N	Local or Watershed	
13) Watershed Management or Protection Plan	N	Local or Watershed	
14) Economic Development Plan	N	County	
15) Comprehensive Emergency Management Plan	N	County	
16) Emergency Response Plan	Y	Local or County	Vestal Fire Dept Emergency Operation Plan dated 3/9/2011
17) Post Disaster Recovery Plan	N	Local	
18) Post Disaster Recovery Ordinance	N	Local	
19) Real Estate Disclosure Requirement	N	State	State Requirement

<b>Regulatory Tools (Codes, Ordinances., Plans)</b>	<b>Do you have this? (Y or N)</b>	<b>Enforcement Authority</b>	<b>Code Citation</b> (Section, Paragraph, Page Number, Date of adoption)
20) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	N	Local or County	

**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	Engineering
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Code and Engineering
3) Planners or engineers with an understanding of natural hazards	Y	Code and Engineering
4) NFIP Floodplain Administrator	Y	Code
5) Surveyor(s)	N	
6) Personnel skilled or trained in "GIS" applications	Y	Engineering
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)	N
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	N
6) Incur debt through general obligation bonds	Y
7) Incur debt through special tax bonds	N
8) Incur debt through private activity bonds	Y
9) Withhold public expenditures in hazard-prone areas	Don't know
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	Y
11) Other	N

#### E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	10	
Building Code Effectiveness Grading Schedule (BCEGS)	5	11/2/2011
Public Protection	4/8B	5/1/2011
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 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 1,000 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

Mitigation projects/activities that have been completed, planned, or ongoing in the town include:

- Planning on building flood wall to protect Town Hall complex, capital project request has been submitted to Town Board.
- In 2006, the Town worked with FEMA on 14 home buyout program. . In 2008 all 14 homes were removed by the Town.
- The town has been working with FEMA for approximately 59 buyouts due to Sept 2011 storm and has received approval for acquisition of 58 structures.
- Working with FEMA for 2 elevation projects due to Sept 2011 storm
- Working with NYSDEC on building a flood control pumping station at Pumphouse Road flood control pond, presently in design stage.
- The Town completed the floodproofing project fore Station #3 (former mitigation action #20).

Other NRSC Funded projects for resulting from the September 2011 storms (DR4031) include:

- Raylene Creek, 320 Raylene Drive and houses above — agreement B-TV-03 at \$245,880.00
- Tracy Creek along Norris Ave — agreement B-TV-01 at \$506,920.80
- Tracy Creek at 910 Tracy Creek Road — septic issue — agreement B-TV- 01 at \$99,081.60
- Main Street at Weis Market — agreement B-TV-02 at \$265,260.00

The progress of mitigation actions from the 2007 Broome County Hazard 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

The town identified the following hazard vulnerabilities:

- River flooding causing flood damage to private residences and businesses/commercial properties
- Creek flooding and erosion causing home flooding and property damage
- Lightning strikes on Town critical facilities, including communication and computer equipment
- High winds downing trees
- Road ditch wash outs
- Flooding of Town building and facilities

It is estimated that in the Town of Vestal, 7,876 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 6.8% is located within the 1% annual chance flood area. \$470,406,400 (10.1%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 578 NFIP policies in the community. While there are 344 policies located within the 1% annual chance flood area, there are only policies issues to property owners in the 1% annual chance flood area. FEMA has identified 47 Repetitive Loss (RL) including 4 Severe Repetitive Loss (SRL) properties in the municipality.

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

### NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1%Boundary (3)	# Policies in 0.2% Boundary (3)	# Policies Outside the 0.2% Flood Hazard (3)
Vestal (T)	578	412	\$23,254,448	47	4	344	74	160

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, \$184,649,136 (4%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 2,817 people may



be displaced, 2,584 people may seek short-term sheltering, and an estimated 52,085 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 <sup>(1)</sup>	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(1)</sup>
Vestal Company 1	Vestal (T)	Fire Station	X	X	21.7	94.0	630	29.2	100.0	720
Vestal Volunteer ES	Vestal (T)	Ambulance	X	X	27.8	100.0	720	39.3	100.0	720
Drovers Inn	Vestal (T)	Historic	X	X	14.3	93.1	-	17.8	100.0	NA
Rounds House	Vestal (T)	Historic	X	X	14.7	97.4	-	18.9	100.0	NA
Vestal Center Methodist Church	Vestal (T)	Poll	X	X	0.0	0.0	-	0.0	0.0	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 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.	Continue and/or enhance programs to keep trees from threatening lives, property, and public infrastructure during storm events	N/A	Severe Storm	3-1 4-2	Highway Dept and Utility Company	Medium	Low	Operating Budget	On-going	Medium	PP, PR	Ongoing
2.	Maintain backup generators and other redundant utilities for Town Hall and radio tower facility and retrofit vulnerable critical facilities including the public water well-field property with secure backup generator.	Existing	Severe Storm, Flood	1-1 4-3 4-5	Engineering and Water Dept	High	Low	Operating Budget	On-going	High	PP, ES	Ongoing
3.	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	Engineering and Code	High	Low	Operating Budget	On-going	Medium	PR	Ongoing
4.	Complete stormwater outfall mapping in GIS format, to identify needs for enhancements of critical infrastructure.	Existing	Flood Severe Storm	1-1 2-3	Engineering	Medium	Low	Operating Budget	Short Term	Low	PR, NR	Ongoing
5.	Continue participation in the National Flood Insurance Program (NFIP).	N/A	Flood	1-2 1-7 2-1	Engineering and Code	High	Low	Operating Budget	On-going	High	PR	Ongoing
6.	Evaluate participation in the CRS.	N/A	Flood	1-2 1-7 2-1	Engineering	Medium	Low	Operating Budget	Short Term	Medium	PR	Ongoing
7.	Consider acquiring flood insurance for Harold Moore Park and the Fire Training Site.	Existing	Flood	1-4 1-6	Town Board	Medium	Low	Operating Budget	Short Term	High	PP, PR	Ongoing



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
8.	Encourage review of site plans by firefighting companies to ensure fire-fighting capacity exists to support development (i.e. tall buildings in w/o access to ladder equipment).	New and Existing	All	4-2 4-3	Planning Board, Fire Dept.	High	Low	Operating Budget	On-going	High	PR, ES	Ongoing
9.	Review current of site plans to that ensure developments served by private wells have adequate well recharge area	New and Existing	Severe Storm, Drought	1-4	Engineering	Medium	Low	Operating Budget	On-going	Medium	PR, NR	Ongoing
10.	In process of closing on demolition of 58 property acquisitions. Continue to participate in or continue to aggressively pursue NFIP flood buyout of flood damaged/flood prone and/or repetitive loss properties for 14 properties in the Castle Garden /North Road in Vestal.	Existing	Flood	1-1 1-2 2-1 2-2 3-2	Engineering and Code	High	High	HMGP	In progress	High	PP	In Process
11.	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.	Existing	Flood	1-1 1-4	Engineering and Code	High	High	HMGP	Short Term DOF	High	PP	Ongoing
12.	Relocate the Town Hall and Police Department building. Due to flooding of the Town Hall and Police Department building, there has been on going talks of relocating.	Existing	Flood	1-1 1-5 1-11	Town Board	High	High	Federal mitigation and Homeland Security grants	Long Term DOF	High	PP, ES	New
13.	Relocate Parks Dept buildings. Due to flooding of the Town Hall and Police Department building, there has been on going talks of relocating, which	Existing	Flood	1-1 1-5 1-11	Town Board	High	High	Federal mitigation and Homeland Security	Long Term DOF	High	PP, ES	New

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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
	would require moving the Parks Building to make room.							grants				
14.	Build permanent storm pump station near the flood walls at Roberts Street and Twin Orchards area	Existing	Flood	1-1 1-11	Town Board; NYSDEC	High	High	Federal mitigation grants	Long Term DOF	High	PP	New
15.	Install 2 permanent generators to existing storm pump stations at Valley Road and Ethel Place	Existing	Severe Storms and Flood	1-1 1-11	Town Board	Medium	Medium	Capital Projects, Grants	Long Term DOF	Low	PP, ES	New
16.	Add crossover pipes and new ditches on country roads that have steep grades, to limit ditch distances.	New	Severe Storm and Flood	1-1 1-8 1-11	Vestal Engineering; Vestal Highway Department	High	Medium	Capital Projects, Grants	On-going	High	PP, SP	New
17.	Build dam and/or detention pond on Fuller Hollow Creek . The Creek has and continues to eroded property and has continual maintenance issues because of high flows.	Existing	Flood, Severe Storm	1-1 1-8 1-11	Vestal Engineering; DEC	High	High	Federal grant opportunities, FEMA, USACE	Long Term DOF	High	SP	New
18.	Flood proof Fire Station #1	Existing	Flood	1-1 1-11 4-3	Vestal Engineering; Vestal Fire	High	Medium	Capital Projects, FEMA and Homeland Security grants	Long Term DOF	High	ES, PP	New
19.	Move Vestal EMS Emergency Squad building out of Twin Orchards area (see below).	Existing	Flood	1-1 1-11 4-3	Town Board; Vestal EMS	High	High	Capital Projects, FEMA and Homeland Security grants	Long Term DOF	High	ES, PP	New
Flood-1	Purchase, elevate, or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.											
	Phase 1: Identify appropriate candidates based on cost-effectiveness versus retrofitting. Evaluate options to reduce flood vulnerability of <b>Vestal Company 1 Vestal Volunteer ES, Drivers Inn, and Rounds House</b> .											
Phase 2: Where determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.												
	Please see above.	Existing	Flood, Severe Storm	1-1 1-2 2-1 2-2	Municipality (via Municipal Engineer/NFIP Floodplain	High	High	FEMA Mitigation Grants	Long Term DOF	Medium	PP	New



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
				3-2	Administrator) with support from BCPD, NYSOEM, FEMA							
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 (below).											
	Please see above.	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	High	PR, PE	New
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"> <li>• Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.</li> <li>• 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.</li> <li>• 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.</li> </ul> Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.											
	Please see above.	N/A	All Hazards, Or Flood	1-2 1-7 1-9 2-1 2-2 3-2 3-4	Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	Medium	Medium	Municipal Budget, HMA programs with local or county match	Short Term	Medium	PE	New
Flood-4	Obtain and archive elevation certificates	N/A	Flood, Severe Storm	1-1 1-2 1-4 1-5 4-1	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	On-going	High	PR	New
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	New

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
Flood-6	Complete ongoing updates of Comprehensive Emergency Management Plans	New and Existing	All Hazards	1-1 1-11 4-2	Municipality with support from NYSOEM	Low	Low	Municipal Budget	On-going	High	PR	New
Flood-7	Create/enhance/ maintain mutual aid agreements with neighboring communities for continuity of operations.	N/A	All Hazards	3-1 4-2	Municipality with support from surrounding municipalities and County	Low	Low	Municipal Budget	On-going	High	PR, ES	New
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	Medium	PR, ES	New
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 managers, engineers).	N/A	All Hazards	1-5 2-2 2-3 3-1 4-1	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget, FEMA HMA and HLS grant programs	Short-Long Term DOF	Medium	PR	New
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"> <li>Support the performance of enhanced risk and vulnerability assessments for hazards of concern.</li> <li>Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use.</li> </ul> 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.											
	Please 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	New

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
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	Municipality with support from County, NYSOEM and FEMA	Medium	Low	Municipal Budget	Short Term DOF	Medium	PE	New
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	Low	PR, ES	New
Earthquake-2	Develop a post-earthquake management plan to address building safety inspections, gas leaks, and other elements to protect public safety.	N/A	Earthquake	1-11 4-5	Municipal Emergency Management, Fire, PD with support from County, NYSOEM	Medium	Medium	Municipal Budget, State and County grant opportunities	Long Term DOF	Low	ES	New

## 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	NYSDEC	New York State Department of Environmental Conservation
BCIDA	Broome County Industrial Development Agency	NYSDOT	New York State Department of Transportation
BCOES	Broome County Office of Emergency Services	NYSEG	New York State Electric and Gas
BCPD	Broome County Planning Department and Economic Development	NYSFSMA	New York State Floodplain and Stormwater Managers Association
BCSWCD	Broome County Soil and Water Conservation District	NYSOEM	New York State Office of Emergency Management
FEMA	Federal Emergency Management Agency	USACE	United States Army Corp of Engineers
NFIP	National Flood Insurance Program	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	M	L	Y	N	Y	M
2	3	H	L	Y	N	Y	H
3	3	H	L	Y	N	Y	M
4	2	M	L	Y	N	N	L
5	3	H	L	Y	N	Y	H
6	3	M	L	Y	N	N	M
7	2	M	L	Y	N	N	H
8	2	H	L	Y	N	Y	H
9	1	M	L	Y	N	Y	M
10	5	H	H	Y	Y	Y	H
11	2	H	H	Y	Y	N	H
12	3	H	H	Y	Y	N	H
13	3	H	H	Y	Y	N	H
14	2	H	H	Y	Y	N	H
15	2	M	M	Y	Y	N	L
16	3	H	M	Y	Y	Y	H
17	3	H	H	Y	Y	N	H
18	3	H	M	Y	Y	N	H
19	3	H	H	Y	Y	N	H
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
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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

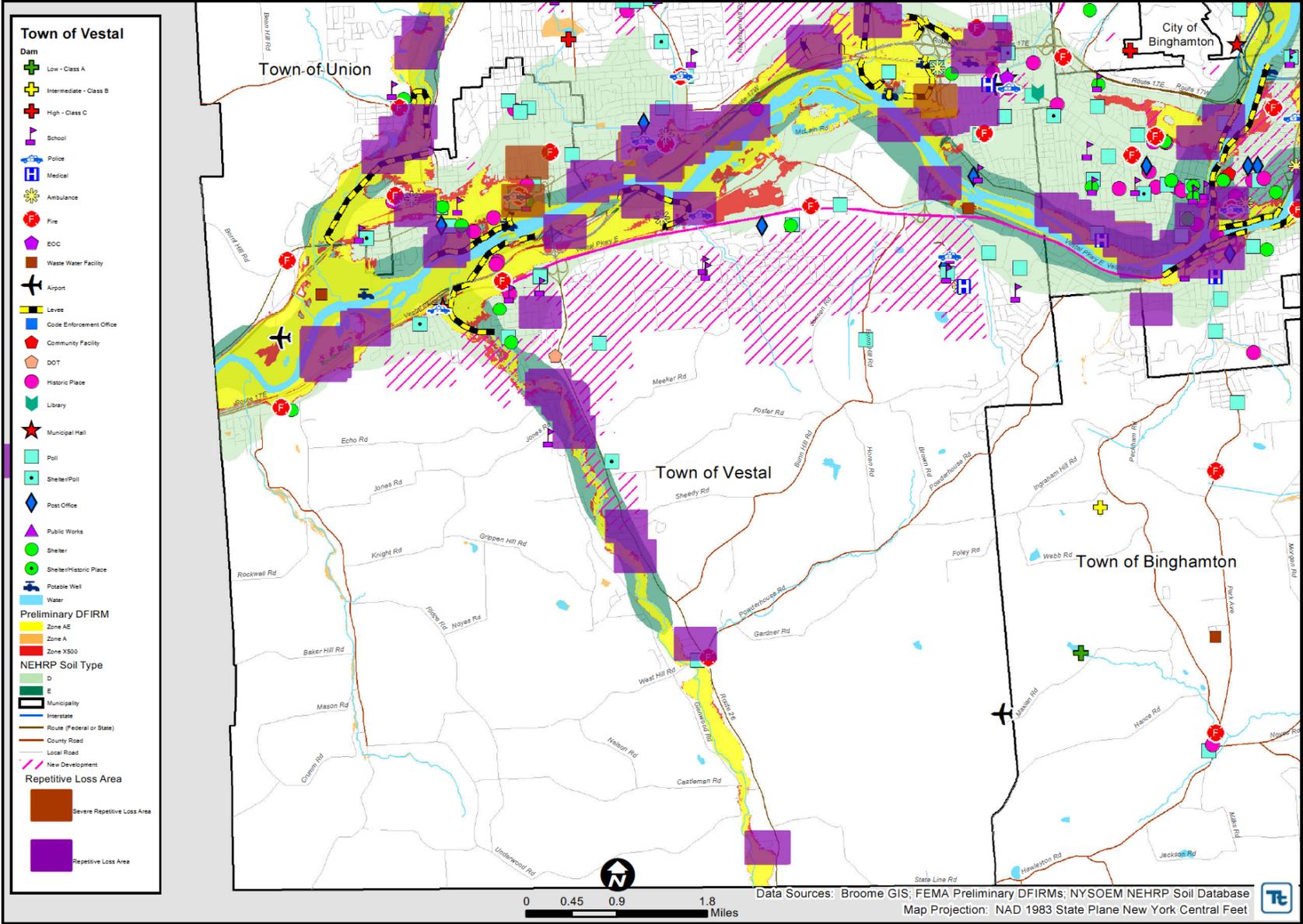
Prioritization of initiatives was based on parameters other than stated above: Not applicable.

### **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 Vestal to illustrate the probable areas impacted within the Town of Vestal 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 Vestal 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.

Planning Mechanisms	Has Been Utilized	Will Be Utilized
<b>Operating Budget</b> 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
<b>Capital Improvement Budget</b> 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
<b>Human Resource Manual</b> Employee job descriptions may contain Hazard Mitigation Actions.		X
<b>Building and Zoning Ordinances</b> 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	
<b>Comprehensive Land Use Plan</b> 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
<b>Grant Applications</b> Data and maps will be used as supporting documentation in grant applications		X
<b>Municipal Ordinances</b> When updating municipal ordinances Hazard Mitigation will be a priority.	X	
<b>Fire Plan</b> The Hazard Mitigation Plan will be used as a resource for the development of future Fire Plans.		X
<b>Capital Improvement Planning</b> 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	
<b>Day to Day Operations</b> Incorporate Hazard Mitigation Actions in daily operations and all projects will be a goal of the municipality.	X	
<b>Local School Service Projects</b> 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
<b>Municipal Budget-</b> Adopted annually Municipality will look at Mitigation Actions when allocating funding.	X	
<b>Economic Development-</b> 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.

## **1. Planning and Regulatory**

Town of Vestal joined the NFIP on 4/1/87, and is currently an active member of the NFIP. Flood Insurance Rate Maps have been in effect for the community since 9/5/1984. Town of Vestal is proactive in floodplain management with ordinances meeting minimum requirements. The Town of Vestal regulate uses which would increase flood heights and flood damage along with controlling alterations which increase flood hazards.

The Town of Vestal has completed Community Assistance Visits (CAV), with the most recent visit completed in Spring 2011. As of December 2012 there is no need for a CAV. Town of Vestal has no outstanding compliance issues.

## **2. Administrative and Technical Staff**

Town of Vestal has identified personnel to manage and uphold the Town of Vestal's compliance with the NFIP. Dedicated staff include: Mark Dedrick, Code Enforcement Officer as Floodplain Manager and Gary Campo, Town Engineer as NFIP Coordinator, Vestal Planning Board to hear and decide on appeals and variances. In addition, Town of Vestal has supplementary staff for which NFIP is an auxiliary duty; personnel include Lora Allen, Engineering Aid as CRS Coordinator. Staff members (both dedicated and supplementary) complete numerous tasks in order for Town of Vestal to be in compliance of NFIP standards. Tasks include determination of substantial improvements, issuances of building permit and inspections, parcel flood map determinations and review and issuance of development permits.

## **3. Financial**

As of 01/31/12 there are 578 of policies enforced within Town of Vestal. Of the 578 insurance policies, 418 are within the Special Flood Hazard Area (SFHA), and 160 are located outside the SFHA. Repetitive loss insurance claims have been reported in several areas within Town of Vestal including Castle Garden's area and Vestal Road/African Road area. As of 01/31/2012 there have been 47 of repetitive loss properties and 4 of severe repetitive loss properties within Town of Vestal.

## **4. Educational**

Town of Vestal conducts numerous educational and/or outreach activities related to the NFIP. Activities include informing the property owners of the need for flood insurance and provide information to residents regarding flood insurance requirements. Code enforcement department has had educational training in complying with the program. The Town of Vestal has taken the initial step of joining the CRS program, by meeting with representatives of FEMA and NYSDEC.

## **5. Actions to Strengthen the Program**

Town of Vestal has taken numerous steps to strengthen the NFIP program and its administration. Actions include informing the property owners of the need for flood insurance and provide information to residents regarding flood insurance requirements, maintaining a library with floodplain information for use by the property owners and participating with other agencies to supply relevant paperwork for communicating with FEMA and other government agencies. As always, we attempt to remain informed through education so that we may respond properly and quickly to the needs of the residents of Vestal.