

## 9.3 VILLAGE OF DOBBS FERRY

This section presents the jurisdictional annex for the Village of Dobbs Ferry.

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

Primary Point of Contact	Alternate Point of Contact
Marcus Serrano, Village Administrator 112 Main St., Dobbs Ferry, NY 10522 (914) 231-8502 <a href="mailto:mserrano@dobbsferry.com">mserrano@dobbsferry.com</a>	Betsy Gelardi, Police Chief 112 Main St., Dobbs Ferry, NY 10522 (914) 231-8517 <a href="mailto:bgelardi@dobbsferrypolice.com">bgelardi@dobbsferrypolice.com</a>

### B.) VILLAGE PROFILE

#### Population

11,188 (estimated 2009 Census population)

#### Location

The Village is located along the eastern shore of the Hudson River, about 20 miles north of New York City.

#### Climate

Westchester County generally experiences short winters and long summers with the annual average temperature of 50 degrees Fahrenheit (°F). The historic record indicates temperature extremes between the seasons are from -34 °F to 106 °F in the County. The County's received precipitation is consistent throughout the year with no stark variations between months; however, the summer months can be slightly higher. The average amount of annual precipitation is approximately 45 inches (Westchester County FIS, 2007).

#### Brief History

Named after a ferry service that traversed the Hudson River at this location, Dobbs Ferry played a vital role in the American Revolutionary War. In July and August, 1781, during the seventh year of the Revolutionary War, Continental Army troops, commanded by General George Washington, were encamped in Dobbs Ferry and neighboring localities, alongside allied French forces under the command of the Comte de Rochambeau. A large British army controlled Manhattan at the time, and Washington chose the Dobbs Ferry area for encampment because he hoped to probe for weaknesses in the British defenses, just 12 miles to the south. But on August 14, 1781, a communication was received from French Admiral Comte de Grasse in the West Indies, which caused Washington to change his strategy. De Grasse's communication, which advocated a joint land and sea attack against the British in Virginia, convinced Washington to risk a march of more than 400 miles to the Chesapeake region of Virginia. Washington's new strategy, adopted and designed in mid-August, 1781, at the encampment of the allied armies, would win the war. The allied armies were ordered to break camp on August 19, 1781: on that date the Americans took the first steps of their march to Virginia along present-day Ashford Avenue and Broadway, en route to victory over General Cornwallis at the Siege of Yorktown and to victory in the Revolutionary War.

The village was originally incorporated in 1873 as Greenburgh, but the name was changed to Dobbs Ferry in 1882.

### Governing Body Format

Mayor, deputy mayor and five trustees.

### Growth/Development Trends

The table below summarizes major residential/commercial development and major infrastructure development that has been identified for the next five (5) years in the Village. Refer to the map in section J of this annex which illustrates the hazard areas along with the location of potential new development within the Village.

New Development/Potential Development in Municipality						
Property Name	Type Residential or Commercial	Number of Structures	Address	Block and Lot	Known Hazard Zone	Description/Status
Rivertowns Square	Mixed Use Commercial (125,000 sq feet) and Residential (223 units)	4 major structures	Stanley and Livingstone Ave adjacent to Sawmill River Parkway	Not available	Adjacent to Floodplain; Earthquake; Extreme Temperature; Severe Storm and Severe Winter Storm	In progress
Realignment of State Route 9 and Livingston Ave	Infrastructure	Not available	State Route 9 and Livingston Ave	Not available	Earthquake; Extreme Temperature; Severe Storm and Severe Winter Storm	In progress ~\$500,000 joint project with State DOT, County and the Village
Dobbs Ferry Waterfront Revitalization Area	Public	Not applicable	The entire length of the Village along the Hudson River	Not available	Earthquake; Extreme Temperature; Flood; Severe Storm and Severe Winter Storm	Walkways, greeways, public access

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

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storms and Flooding (Tropical Storm Doria)	DR-311	August 25-28, 1971	\$29 K in property and crop damages Countywide
Tropical Storm Agnes	DR-338	June 20-25, 1972	\$806 K in property and crop damages Countywide
Flooding	NA	June 28, 1973	\$38 M in property damages Countywide
Severe Storms, Heavy Rain, Landslides, Flooding (Hurricane Eloise)	DR-487	September 25-27, 1975	NA
Snowstorm	NA	February 11-12, 1983	\$63 K in property damages Countywide
Coastal Storms and Flooding	DR-702	April 5, 1984	NA
Coastal Storm, High Tides, Heavy Rain, Flooding	DR-974	December 11-12, 1992	\$7.1 M in damages Countywide
Freezing Rain	NA	January 3, 1993	\$5 M in property damages Countywide
Severe Blizzard	EM-3107	March 12-15, 1993	NA
Blizzard	DR-1093	January 7-9, 1996	\$1 B in damages overall
Severe Storms and Flooding	DR-1146	October 19-20, 1996	NA
Hurricane Floyd	DR-1296	September 14-17, 1999	NA
Snowstorm	EM-3184	February 17-18, 2003	\$1.8 M in property damages Countywide
Severe Storms and Flooding	DR-1589	April 2-4, 2005	\$4.3 M in damages Countywide
Severe Storms and Flooding	DR-1650	June / July 2006	NA
Severe Storms and Inland and Coastal Flooding	DR-1692	April 14-18, 2007	NA
Severe Winter Snowstorm	NA	February 26-27 <sup>m</sup> , 2010	NA
Nor'Easter	DR-1899	March 13-15, 2010	NA

NA = Not available.

**Number of FEMA Identified Repetitive Flood Loss Properties:** 1  
**Number of FEMA Identified Severe Repetitive Flood Loss Properties:** 0

Source: FEMA Region 2, Received February 2010

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

Rank #	Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a,c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
5	Earthquake	Annualized Loss: \$15,381 500-Year MRP: \$885,979 2,500-Year MRP: \$14,809,817 <sup>c, e</sup>	Rare	16	Low
3	Extreme Temperatures	Not available	Frequent	36	Medium
3	Flood	Annualized Loss: \$194,000 100-Year MRP: \$731,000 500-Year MRP: \$883,000 <sup>c, e</sup>	Frequent	36	Medium
1	Severe Storm	Annualized Loss: \$285,568 100-Year MRP: \$2,637,855 500-Year MRP: \$24,029,864 <sup>c, d</sup>	Frequent	51	High
2	Severe Winter Storm	1% - \$11,324,860 5% - \$56,624,300 <sup>c, d</sup>	Frequent	48	High
4	Transportation Hazards	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 40 and above  
Medium = Total hazard priority risk ranking of 20-40  
Low = Total hazard risk ranking below 20
- c. The valuation of general building stock and loss estimates determined in the Greater Greenburgh Planning Area was based on the default general building stock database provided in HAZUS-MH MR4 (RSMMeans 2006).
- d. Loss estimates are structural values only for the severe storm and severe winter storm hazard loss estimates; does not include the value of contents.
- e. Loss estimates represent both structure and contents for the flood hazard and earthquake hazards.

**E.) CAPABILITY ASSESSMENT**

This section identifies the following capabilities of the local jurisdiction:

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

**E.1) Legal and Regulatory Capability**

Regulatory Tools (Codes, Ordinances., Plans)	Local Authority (Y or N)	Prohibitions (State or Federal) (Y or N)	Higher Jurisdictional Authority (Y or N)	State Mandated (Y or N)	Code Citation (Section, Paragraph, Page Number, date of adoption)
1) Building Code	Y	N	Y	Y	NYS Building Code Ch. 127 Building Construction
2) Zoning Ordinance	Y	Y	Y	N	Ch. 300 Zoning and Land Use, Adopted 2-5-1974
3) Subdivision Ordinance	Y	N	N	N	Ch. 268 Subdivision of Land, Adopted 2-1-1966
4) NFIP Flood Damage Prevention Ordinance	Y	Y	Y	Y	Ch. 186 Flood Damage Prevention, Adopted 3-31-1987, Rev. 10-9-2005
5) Growth Management	Y	N	N	N	
6) Floodplain Management / Basin Plan	Y	Y	Y	N	
7) Stormwater Management Plan/Ordinance	Y	N	N	Y	Ch. 263 Stormwater Management and Erosion and Sediment Control, Adopted 3-27-2007
8) Comprehensive Plan / Master Plan/ General Plan	Y	Y	Y	N	
9) Capital Improvements Plan	Y	N	N	N	
10) Site Plan Review Requirements	Y	Y	Y	N	Ch. 300 Zoning and Land Use, Article XVII Site Plan Review and Approval, Adopted 2-5-1974
11) Open Space Plan	Y	N	N	N	
12) Waterfront Management or Protection Plan					Dobbs Ferry Shoreline Stabilization Assessment Report (August, 2009)
13) Economic Development Plan	N	Y	Y	N	
14) Emergency Response Plan	Y	N	N	Y	Currently being updated coincident with this mitigation plan
15) Post Disaster Recovery Plan	Y	N	N	N	
16) Post Disaster Recovery Ordinance	Y	N	N	N	
17) Real Estate Disclosure Requirements	N	N	N	N	
18) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	Y	Y	Y	N	Ch. 167 Environmental Quality Review

**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		Hahn Engineering George E. Pommer, P.E.
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure		
3) Planners or engineers with an understanding of natural hazards		
4) NFIP Floodplain Administrator (if you are in the NFIP, you <b>must</b> have one.)	Y	Village Engineer (per Ch. 186-12 of Village Code) Currently Brian Cook, Building Inspector
5) Surveyor(s)		
6) Personnel skilled or trained in "GIS" applications		
7) Scientist familiar with natural hazards		
8) Emergency Manager		
9) Grant Writer(s)		
10) Staff with expertise or training in benefit/cost analysis		

**E.3) Fiscal Capability**

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

#### E.4) Community Classifications

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

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

The classifications listed above relate to the community's effectiveness in providing services that may impact its vulnerability to the natural hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class one (1) being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

## F.) PROPOSED HAZARD MITIGATION INITIATIVES

Note that many of the identified mitigation initiatives in Table F 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
VDF-1	Complete as much of the Beacon Hill/Ashford Avenue drainage project as possible, given the amount of currently available funding, to increase stormwater capacity and mitigate flooding along Ashford Avenue. This is a joint project with the County.	Existing	Flood, Severe Storm, Transportation	1-2, 1-3, 1-6; 5-3; 6-4	Superintendent of Public Works and Engineer (private consulting firm) with support from Westchester County	High Road, Village park/Pool and potential private property damages	High [Approximately \$150,000 (\$75,000 Federal Funds; \$75,000 local match)]	Federal grant and Village match	Short	High
VDF-2	Pursue HMA grant funding to complete the drainage project referenced in VDF-1 to increase stormwater capacity at Beacon Hill Drive and Ashford Avenue to mitigate flooding along Ashford Avenue.	Existing	Flood, Severe Storm, Transportation	1-2, 1-3, 1-6; 5-3; 6-4	Superintendent of Public Works and Engineer (private consulting firm) with support from Westchester County	High Road, Village park/Pool and potential private property damages	To be determined based on amount of work remaining (see VDF-1)	FEMA Mitigation Grant Programs and local budget for match	Short DOF	High
VDF-3	Complete engineering plans and pursue funding to install a larger culvert to increase stormwater capacity and mitigate flooding along Washington Avenue.  The current stone	Existing	Flood, Severe Storm, Transportation	1-2, 1-3, 1-6; 5-3; 6-4	Superintendent of Public Works and Engineer (private consulting firm)	Medium - High Road washed out; Road closure; Flooding on private property (golf	Medium (Approximately \$35,000)	FEMA Mitigation Grant Programs and local budget for match	Short DOF	High



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
	culvert is collapsing and repairs conducted over the past 2-3 years have been unsuccessful. The flooding has washed out the road, caused road closures and flooded the golf course.					course)				
VDF-4	Continue to implement the Village's steep slope ordinance to limit development in this hazard area and preserve open space	New	Earthquake, Flood, Severe Storm, Severe Winter Storm	1-4; 3-5, 3-6; 4-2; 6-2	Building Inspector	Low	Low	Village	On-going	High
VDF-5	Install shoreline stabilization measures along the Dobbs Ferry Waterfront Park to protect from the 100-year flood (base flood) – as described in the Dobbs Ferry Shoreline Stabilization Assessment Report. The Village has already received NYSDEC permits and is waiting on USACE permitting.	New & Existing	Flood, Severe Storm	3-1, 3-2, 3-6; 4-2	Village Engineer (private consulting firm) with support from NYSDEC, USACE, NYSDOS	High Protect buildings, transportation features, recreation assets	High (Approximately \$4 Million)	NYSDOS has awarded \$2 Million; local donor has pledged \$1 Million; and the Village has bonded \$1 Million.	Short (ongoing)	High
VDF-6	As part of the renovation of the Village-owned train station building, move the boiler to a higher elevation out of the crawl-space to mitigate	Existing	Flood, Severe Storm	1-1, 1-6; 5-1	Private with support from the Village Building Department	Medium Utility damage	Low	Private developer	Short	High

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
	damages due to flooding.									
VDF-7	Complete the construction of a new waste water pump station (WWPS) to replace the flood vulnerable Chauncy WWPS	Existing	Flood, Severe Storm	1-2, 1-6; 4-1; 5-1, 5-3	Superintendent of Public Works	High Damage to pump station and loss of service	High (\$175,000)	Private developer	Short	High
VDF-8	Investigate and pursue the submittal of a LOMR (Letter of Map Revision) requesting to remove Walgrove Ave from Broadway to Bellewood Ave from the 500-year flood zone	New & Existing	Flood	1-9; 6-4	Municipality (NFIP Floodplain Administrator) with support from FEMA	Low	Low	Village	Short	Low
VDF-9	Retrofit 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 for retrofitting based on cost-effectiveness versus relocation.  Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on	Existing	Flood, Severe Storm, Earthquake	1-1, 1-5, 1-6, 1-8; 2-2, 2-4, 2-5, 2-6; 4-1, 4-2; 5-3; 6-4	Municipality (via NFIP Floodplain Administrator) with support from SOEM and FEMA	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF	High

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
	available funding from FEMA and local match availability.									
VDF-10	<p>Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.</p> <p>Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.</p> <p>Phase 2: Where retrofitting is determined to be a viable option, consider implementation and work with property owners based on available funding from FEMA and local match availability.</p>	Existing	Flood, Severe Storm	1-1, 1-5, 1-6, 1-8; 2-2, 2-4, 2-5, 2-6; 3-4, 3-6; 4-1, 4-2; 5-3; 6-4	Municipality (via NFIP Floodplain Administrator) with support from SOEM and FEMA	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF	High
VDF-11	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),	New & Existing	Flood, Severe Storms	1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-9; 2-4; 3-1, 3-3, 3-4, 3-5, 3-6; 4-2; 6-2	Municipality (via NFIP Floodplain Administrator) with support from SOME, ISO and FEMA	High	Low - Medium	Local Budget	Ongoing	High

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
	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 12 – 16 (below).									
VDF-12	Begin the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements).	New & Existing	Flood, Severe Storms	1-5, 1-9; All of 4	Municipality (NFIP Floodplain Administrator), with support from SOME and FEMA	Low	Low	Municipal Budget	Short	Medium
VDF-13	Conduct and facilitate community and public education and outreach for Village 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 Greenburgh HMP website, and regularly post notices on the Village homepage referencing the Greenburgh 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 the village 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.									
	See above.	N/A	All Hazards	All of 2; 4-2; 6-4	Village Police, Fire and DPW, with support from Greater Greenburgh Planning Partners, SOEM, FEMA	Low-Medium	Low - Medium	Municipal Budget; HMA programs with local or county match	Short	High

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
VDF-14	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	N/A	Flood, Severe Storms	1-5, 1-9; 6-4	NFIP Floodplain Administrator with support from NYSDEC, SOEM, FEMA	Low	Low	Municipal Budget	Short (year 1)	Medium
VDF-15	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM, and consider relevant continuing education training such as FEMA Benefit-Cost Analysis.	N/A	Flood, Severe Storms	1-9; 5-4	NFIP Floodplain Administrator with support from NYSDEC, SOEM, FEMA	Low	Low	Municipal Budget	Short (DOF)	Medium
VDF-16	Begin the process to apply to participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	N/A	Flood, Severe Storms	1-5, 1-8, 1-9; 2-2, 2-3, 2-4, 2-5, 2-6; 6-4	NFIP Floodplain Administrator with support from NYSDEC, SOEM, FEMA	Low	Low	Municipal Budget	Short (year 1)	Medium
VDF-17	Continue to support the implementation,	New & Existing	All Hazards	All	Municipality (via mitigation)	Low	Low	Local Budget,	Ongoing	High

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
	monitoring, maintenance, and updating of this Plan, as defined in Section 7.0				planning point of contacts) with support from Greenburgh Planning Partners (through their Points of Contact), SOEM			possibly FEMA Mitigation Grant Funding for 5-year update		
VDF-18	Complete the ongoing updates of the Comprehensive Emergency Management Plans for Greenburgh and the six participating municipalities	New & Existing	All Hazards	1-6; 4-1; All of 5; 6-2, 6-3, 6-4	Village Police and Fire Chief with support from SOEM	High	Low – High (for 5-year update)	Local Budget	Ongoing	High
VDF-19	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.	New & Existing	All Hazards	4-1; 5-1, 5-5, 5-6; All of 6	Village Police and Fire Chief with support from Surrounding municipalities and County	Low	Low	Local Budget	Ongoing	Medium
VDF-20	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,	NA	All Hazards	1-9; 6-1; 6-4	Public Works Superintendent with support from FEMA, SOEM	Low	Low	Local budget	Short	Medium

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
	submissions, record-keeping									
VDF-21	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).	NA	All Hazards	1-9; 5-4; 6-1, 6-4	Public Works Superintendent or hired consultant with support from County, SOEM	Medium	Medium	Local budget, FEMA HMA and HLS grant programs	Short – Long-term DOF	Medium
VDF-22	Change ordinance to identify the Building Inspector as the NFIP Floodplain Administrator.	NA	Flood, Severe Storms	1-4, 1-5; 2-4; 6-2, 6-3	Any department may recommend and the Village Board approves	Low	Low	Village	Short	High
VDF-23	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 including flooding, earthquake, wind, and land failure.</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.									
	See above.	Existing	All Hazards	1-5, 1-6, 1-9; 4-1; 5-1, 5-3, 5-4; 6-2, 6-4	Greenburgh HMP Coordinator	Medium	Medium	Mitigation grant programs (PDM or HMGP) with local	Longterm DOF	Medium

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 match	Timeline	Priority

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.

**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.



## G.) ANALYSIS OF MITIGATION ACTIONS

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

Hazard of Concern	Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	VDF-4, 17-21	VDF-9, 17	VDF-9, 13, 17, 20, 21, 23	VDF-4, 17	VDF-17, 18, 19, 23	VDF-17
Extreme Temperature	VDF-17 - 21	VDF-17	VDF-13, 17, 20, 21, 23	VDF-17	VDF-17, 18, 19, 23	VDF-17
Flooding (riverine, flash, coastal and urban flooding)	VDF-4, 8, 11, 12, 14, 15, 16-22	VDF-1, 2, 3, 6, 7, 9-11, 16, 17	VDF-9-13, 15, 16, 17, 20, 21, 23	VDF-4, 17	VDF-17, 18, 19, 23	VDF-1, 2, 3, 5, 17
Severe Storms (windstorms, thunderstorms, hail, lightning and tornados)	VDF-4, 17-22	VDF-1, 2, 3, 6, 7, 9-11, 17	VDF-9-13, 16, 17, 20, 21, 23	VDF-4, 17	VDF-17, 18, 19, 23	VDF-1, 2, 3, 5, 17
Severe Winter Storm (heavy snow, blizzards, ice storms)	VDF-4, 17-21	VDF-17	VDF-13, 17, 20, 21, 23	VDF-4, 17	VDF-17, 18, 19, 23	VDF-17
Transportation Hazards	VDF-17-19	VDF-1, 2, 3, 17	VDF-13, 17, 20, 21, 23	VDF-17	VDF-17, 18, 19, 23	VDF-1, 2, 3, 17

Notes:

- 1. Prevention:** Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- 2. Property Protection:** Actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- 3. Public Education and Awareness:** Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- 4. Natural Resource Protection:** Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- 5. Emergency Services:** Actions that protect people and property, during and immediately following, a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.
- 6. Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.

**H.) PRIORITIZATION OF MITIGATION INITIATIVES**

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
VDF-1	5	H	H	Y	Y	Y	H
VDF-2	5	H	TBD	Y	Y	N	H
VDF-3	5	H	M	Y	Y	N	H
VDF-4	5	L	L	Y	N	Y	H
VDF-5	4	H	H	Y	Y	Y (local match)	H
VDF-6	3	H	L	Y	Y	N	H
VDF-7	5	H	H	Y	Y	N	H
VDF-8	2	L	L	Y	N	Y	L
VDF-9	12	H	H	Y	Y	N	M-H*
VDF-10	14	H	H	Y	Y	N	M-H*
VDF-11	13	H	L-M	Y	N	Y	H
VDF-12	4	L	L	Y	N	Y	M
VDF-13	9	M-L	M-L	Y	Y	N	H
VDF-14	3	L	L	Y	N	N	M
VDF-15	2	L	L	Y	N	N	M
VDF-16	9	L	L	Y	N	N	M
VDF-17	34	H	L-H	Y	N (Y for 5-year update)	N	H
VDF-18	11	L	L	Y	Y	N	H
VDF-19	8	L	L	Y	N	N	M
VDF-20	3	M	M	Y	N	N	M
VDF-21	4	M	M	Y	Y	N	M
VDF-22	5	L	L	Y	N	Y	H
VDF-23	9	M	M	N (planning effort)	Y	N	M

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

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

### **Explanation of Priorities**

High Priority = A project that meets multiple objectives (i.e., multiple hazards), benefits exceeds cost, has funding secured or is an on-going project and project meets eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation Grant Program (PDM) programs. High priority projects can be completed in the short term (1 to 5 years).

Medium Priority = A project that meets goals and objectives, benefits exceeds costs, funding has not been secured but project is grant eligible under, HMGP, PDM or other grant programs. Project can be completed in the short term, once funding is completed. Medium priority projects will become high priority projects once funding is secured.

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

Prioritization of initiatives was based on above definitions: Yes

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

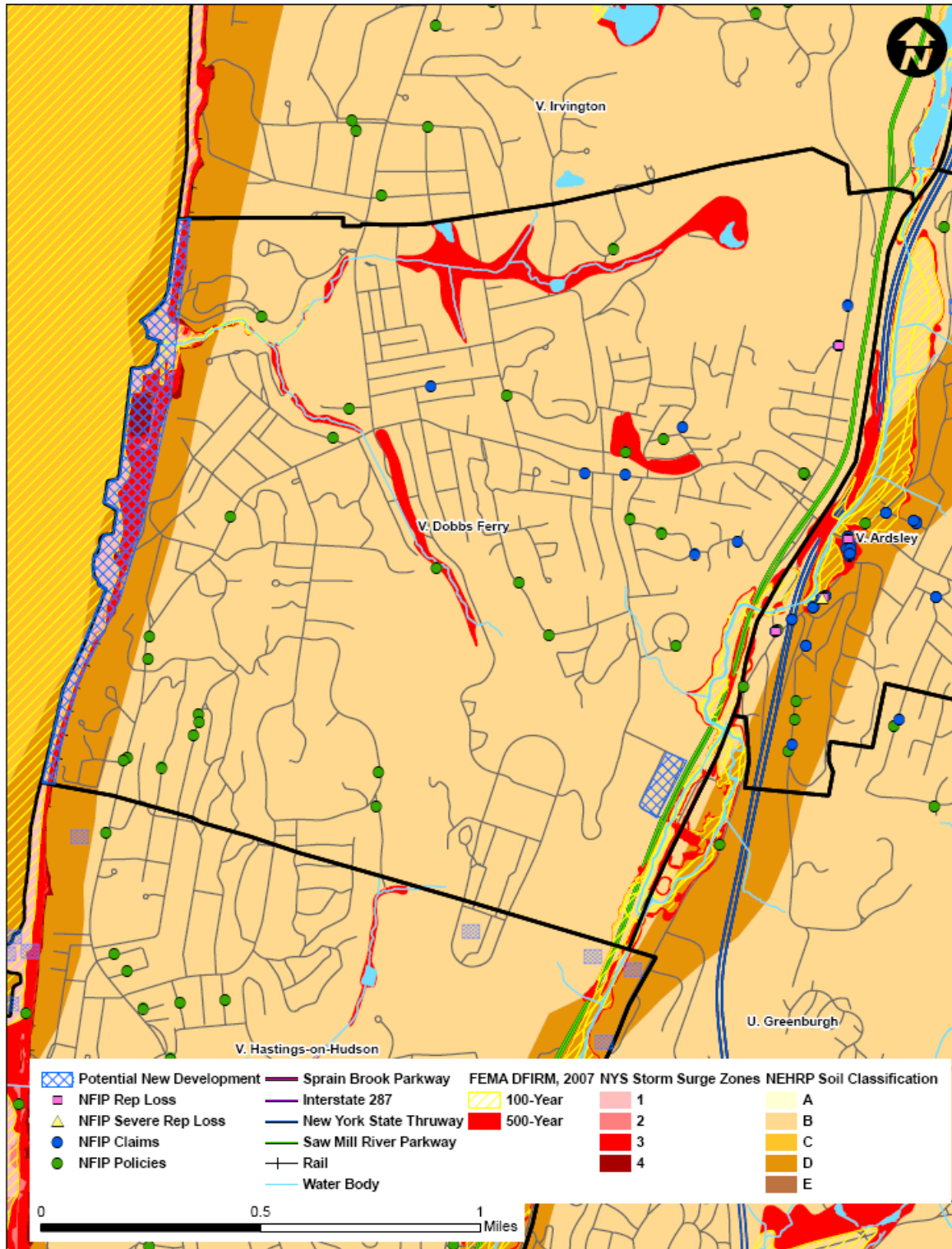
#### **I.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

#### **J.) HAZARD AREA EXTENT AND LOCATION**

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

#### **K.) ADDITIONAL COMMENTS**

No additional comments at this time.



Sources: FEMA Region II, 2010; HAZUS-MH MR4; NYSDPC, 2008

Notes: NFIP = National Flood Insurance Program. Rep = Repetitive. The entire municipality is vulnerable to the following hazards: earthquake, extreme temperature, severe storm, severe winter storm and transportation. All potential development locations are approximate and not to scale.