

Introduction

The Mitigation Strategy section describes how the Town/Village of Harrison will reduce, control or limit potential losses of life and property from the natural hazards identified in the Risk Assessment section. Mitigation encompasses activities that prevent an emergency, diminish the chance of an emergency from occurring, or lessens the impacts of unavoidable emergencies. The strategy focuses on existing and potential mitigation actions and is the product of a coordinated effort by the Town's departments and partners.

This Mitigation Strategy was developed consistent with the process and steps presented in the Federal Emergency Management Agency's (FEMA) Guide 386-3: Developing the Mitigation Plan. This section satisfies the following requirements:

Requirement §201.6(c)(3)(i): [The hazard mitigation strategy *shall* include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

Requirement §201.6(c)(3)(ii): [The mitigation strategy *shall* include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Requirement: §201.6(c)(3)(iii): [The mitigation strategy section *shall* include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization *shall* include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

The Mitigation Strategy section includes: the identification of goals and objectives; developing, evaluating and prioritizing alternate mitigation actions; preparing an implementation plan; and assessing the Town's capabilities to implement the plan.

Goals and Objectives

The first step in developing a hazard mitigation strategy is to establish goals and objectives to reduce or eliminate the Town's long-term vulnerability to natural hazard events. Goals and objectives are the foundation of an effective hazard mitigation plan. They establish a framework for identifying risks and developing strategies to mitigate those risks.

FEMA guidance describes *goals* as general guidelines that explain what a community wants to achieve. They are usually broad policy-type statements, long term and represent global visions. *Objectives* define strategies or implementation steps to attain the identified goals. *Mitigation actions* are specific actions that help a community achieve its goals and objectives.

Based on discussions with the Planning Committee, meetings with local officials and staff, and public input, the following goals and objectives provide the framework for developing the Town's mitigation strategy.

Goal 1: Protect Life and Property

- Objective 1.1 Reduce the impacts of hazards on vulnerable populations, homes, businesses and institutions
- Objective 1.2 Integrate new hazards and risk information into enhancing local building codes and land use planning mechanisms
- Objective 1.3 Educate residents and businesses about insurance coverage for natural hazards
- Objective 1.4 Encourage property owners to take preventative actions especially in repetitive loss areas vulnerable to flooding
- Objective 1.5 Adopt and enforce public policies to minimize impacts of development and enhance safe construction in hazard areas
- Objective 1.6 Identify, pursue and maximize the use of outside sources of funding

Goal 2: Safeguard Critical Public Facilities & Infrastructure

- Objective 2.1 Protect Critical assets
- Objective 2.2 Protect Facility contents
- Objective 2.3 Review and enhance redundancies for critical response networks
- Objective 2.4 Incorporate mitigation strategies into capital improvement projects and maintenance upgrades

Goal 3: Maintain and Enhance Emergency Response Capabilities

- Objective 3.1 Identify the need for and acquire any special emergency services, training and equipment
- Objective 3.2 Ensure continuity of government operations, emergency services, and essential facilities during and immediately after disaster and hazard events
- Objective 3.3 Integrate new hazard and risk information into emergency operation plans

Goal 4: Protect the Environment

- Objective 4.1 Incorporate hazard considerations into natural resource protection
- Objective 4.2 Implement mitigation actions that encourage environmental stewardship and protection of the environment

Goal 5: Increase Awareness & Preparedness

- Objective 5.1 Develop education and outreach programs for the public, public officials, developers, realtors, contractors, and building owners
- Objective 5.2 Enhance understanding of natural hazards and the risks they pose
- Objective 5.3 Improve hazard information, including databases and maps

- Objective 5.4 Partner with the private sector, local schools and institutions of higher learning about natural hazards and disaster preparedness
- Objective 5.5 Support inter-governmental and inter-agency partnerships to foster hazard mitigation activities and projects.

Identification and Analysis of Mitigation Actions

Identification

Mitigation actions include programs, plans, projects, or policies that help reduce or eliminate the long-term risk to human life and property from natural hazards. The Planning Committee identified and analyzed a range of hazard-specific mitigation actions. Existing and potential mitigation actions were identified based on the following criteria:

- Reduce or eliminate the long-term risk to human and life and property from at least one of the seven natural hazards identified in the Risk Assessment Section
- Fall under one or more the six FEMA mitigation action categories
- Achieve one or more of the five hazard mitigation goals and 20 objectives

There are six FEMA classifications of hazard mitigation strategies that can minimize loss of life and property and protect public health and safety during hazard events.

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, building codes, capital improvement programs, open space preservation, and storm water management regulations.
2. **Property Protection:** Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal 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 the 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, in addition to minimizing hazard losses 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 after a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.

6. **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.

Table 6-1 lists the mitigation actions identified by the Planning Committee and the natural hazards and mitigation goals and objectives they address.

Hazards							Table 6-1 Mitigation Actions	Goals & Objectives				
Flood	Severe	Severe Winter Storm	Earthquake	Extreme Heat	Drought	Dam Failure		Protect Life & Property	Safeguard Critical Facilities & Infrastructure	Enhance Maintain & Emergency Response Capabilities	Protect the Environment	Increase Public Awareness & Preparedness
X	X	X	X	X	X	X	1. Conduct inventory and assessment of public facilities and populations that may be vulnerable to natural hazards	1.1	2.1,2.2	3.2,3.3		
X	X	X	X	X	X	X	2. Revise Town's capital budgeting process to include 3-5 year capital programming in order to identify priorities for mitigation measures and outside funding for natural hazards that impact Town facilities, equipment, infrastructure and at-risk populations.	1.6	2.1,2.2, 2.4	3.1		
X	X	X					3. Identify and pursue funding sources for flood abatement and drainage improvement projects involving public facilities, equipment, and infrastructure.	1.1	2.1,2.2	3.1,3.2		
X	X	X					4. Identify and pursue funding sources and other incentives to encourage and monitor flood resistant construction measures and practices for new construction and renovations in floodplains and repetitive flood loss areas.	1.1,1.4, 1.6	2.1			
X	X	X					5. Evaluate participation in the CRS (Community Rating System) program	1.1,1.4, 1.6	2.1			
X	X	X	X		X		6. Integrate hazard resistant mitigation measures into the repair and rehabilitation of Town facilities and infrastructure.		2.1,2.2, 2.4	3.2		
X	X	X	X	X			7. Assess the capability to shelter residents during hazard events including the availability of adequate back-up power for cooling and heating at critical facilities.	1.1	2.1	3.2		

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			X				8. For new or remodeled buildings enforce strict compliance with NYS Building Code earthquake construction recommendations.	1.1,1.2,				
X	X	X					9. Maintain and enhance cleaning of stormwater collection and conveyance system especially in flood prone areas.	1.1	2.1,2.2	3.2	4.1	
X	X	X					10. Partner with neighboring communities to encourage Westchester County to restore and add flood gauges on the Blind Brook, Beaver Swamp Brook, Brentwood Brook, and Mamaroneck River.	1.1	2.1,2.2	3.2	4.1	5.3,5.5
X	X	X	X	X	X	X	11. Update and adopt an emergency response plan.	1.1	2.3	3.2,3.3		
X	X	X		X			12. Investigate enhanced weather forecasting and warning systems.	1.1	2.1,2.2	3.2		5.2,5.3
X	X	X	X	X			13. Implement reverse 911 for Town.	1.1,1.4		3.2		5.1
X	X	X	X			X	14. Apply for new Town-wide communication frequencies to include all emergency services.		2.3	3.2		
X	X	X	X	X			15. Upgrade and acquire new portable generators for emergency services.	1.1	2.1	3.2		

Hazards							Table 6-1 Mitigation Actions	Goals & Objectives				
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X	X	X	X	X	X	X	16. Continue to support and provide for training opportunities for emergency service personnel.	1.1	2.1,2.2	3.1,3.2		
X	X	X	X	X	X	X	17. Prepare and provide informational materials on natural hazard preparation for the Town's website, Cable TV access channel, schools, community centers, day care centers, senior centers and other community venues.	1.1,1.3 1.4				5.1,5.2 5.3, 5.4
X	X	X	X				18. Integrate hazard mitigation measures into the Comprehensive Plan Update.	1.1,1.2 1.5			4.1 4.2	5.2,5.3
X	X						19. Encourage low-impact design in order to reduce surface water flows.	1.2,1.5			4.1 4.2	
X	X	X			X		20. Revise and adopt an updated wetland local law and map.	1.2,1.5			4.1 4.2	
X	X						21. Make available a GIS link on the Town website identifying floodplain and repetitive loss areas.	1.2				5.2,5.3
X	X						22. Revise, strengthen, and adopt a steep slope protection law.	1.2,1.5			4.1 4.2	
	X	X	X				23. Closely monitor the placement and maintenance of trees on public property and rights-of-way	1.1	2.1,2.2	3.2		
X	X	X	X	X			24. Partner with utility providers to incorporate hazard mitigation measures into their maintenance operations and capital plans.	1.1	2.1, 2.2	3.2	4.2	5.4

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					X		25. Provide information to residents and businesses regarding water conservation measures.	1.1				5.1,5.2 5.4,5.5
X	X	X	X	X	X	X	26. Develop a public information outreach program for residents, businesses, community groups and organizations including area colleges addressing concerns and risks of natural hazards as well as preparation and preventative measures.	1.1,1.3				5.1,5.2 5.4,5.5

Analysis

The Planning Committee next analyzed potential mitigation actions using the FEMA STAPLEE method. STAPLEE is an evaluation methodology to help identify the benefits and constraints of a particular mitigation action. The STAPLEE criteria are defined below.

- **S**ocial
 - Community Acceptance, public support and involvement
 - Consider effects on selected segments of the population
- **T**echnical
 - Technical Feasibility
 - Effective in reduction of long-term losses, impacts and risks
 - Effective in minimizing secondary losses
- **A**dministrative
 - Available staffing and funding to implement the proposed actions
 - Ability to maintain and manage the mitigation measures
- **P**olitical
 - Acceptable to and support by community elected officials
 - Public support and involvement
- **L**egal
 - Existing local and State authority to undertake an action
 - Meet regulatory requirements
 - Consider legal liabilities for an action
- **E**conomic
 - Costs and benefits of an action
 - Identify outside funding requirements
 - Burden to the tax base or local economy
- **E**nvironmental
 - Effect on land and water
 - Compliance with environmental laws and regulations
 - Consistent with community environmental goals

Table 6-2 summarizes the STAPLEE evaluation of potential mitigation actions. The seven STAPLEE evaluation criteria were assigned a plus (+), if the proposed action is favorable; a minus (-), if the action is unfavorable; or a Not Applicable (N) if the evaluation criteria does not apply to the mitigation action.

Table 6-2 STAPLEE ACTION EVALUATION: TOWN/VILLAGE OF HARRISON

Alternative Actions	STAPLEE Criteria Considerations																			
	+ Favorable - Less favorable N Not Applicable																			
	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)			E (Environmental)		
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Consistent with Community Environmental Goals	Consistent with Federal Laws
1. Conduct inventory and assessment of public facilities and populations that may be vulnerable to natural hazards.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	N	-	N	N	N
2. Revise Town's capital budgeting process to include 3-5 year capital programming in order to identify priorities for mitigation measures and outside funding for natural hazards that impact Town facilities, equipment, infrastructure and at-risk populations.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	N	N	N	N
3. Identify and pursue funding sources for flood abatement and drainage improvement projects involving public facilities,	+	+	+	+	+	+	N	+	+	+	+	+	+	+	+	+	-	+	+	N

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Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Consistent with Community Environmental Goals	Consistent with Federal Laws
equipment, and infrastructure.																				
4. Identify and pursue funding sources and other incentives to encourage and monitor flood resistant construction measures and practices for new construction and renovations in floodplains and repetitive flood loss areas.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	+	+	N	N
5. Evaluate participation in the CRS (Community Rating System) program	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	+	+	N	N
6. Integrate hazard resistant mitigation measures into the	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	N	+	+	N	N

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repair and rehabilitation of Town facilities and infrastructure.																					
7. Assess the capability to shelter residents during natural hazard events including the availability of adequate back-up power for cooling and heating at critical facilities.	+	+	+	+	+	+	+	N	+	+	+	+	+	N	+	+	N	+	N	N	N
8. For new or remodeled buildings enforce strict compliance with NYS Building Code earthquake construction recommendations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N	+	N	N	N
9. Maintain and enhance cleaning of stormwater collection and conveyance system especially in flood prone areas.	+	+	+	-	+	+	+	+	+	+	N	+	N	+	-	+	-	+	N	N	N
10. Partner with neighboring communities to encourage	+	+	+	+	+	-	-	-	+	+	+	+	+	N	+	+	+	-	+	N	N

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Westchester County to restore and add flood gauges on the Blind Brook, Beaver Swamp Brook, Brentwood Brook, and Mamaroneck River.																				
11. Update and adopt an emergency response plan.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	N	N	N	N
12. Investigate enhanced weather forecasting and warning systems.	+	+	+	-	+	+	-	+	+	+	N	+	N	+	+	+	N	N	N	N
13. Implement reverse 911 for Town.	+	+	+	-	+	+	-	-	+	+	+	+	N	+	-	N	-	N	N	N
14. Apply for new Town-wide communication frequencies to include all emergency services.	+	+	+	-	+	+	+	+	+	+	+	+	N	+	+	+	N	N	N	N
15. Upgrade and acquire new portable generators for emergency service personnel.	+	+	+	-	+	+	+	+	+	+	N	+	N	+	-	+	-	N	N	N

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16. Continue to support and provide for training opportunities for emergency service personnel.	+	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	N	N	N	N		
17. Prepare and provide informational materials on natural hazard preparation for the Town's website, Cable TV access channel, schools, community centers, day care centers, senior centers and other community venues.	+	+	+	+	+	+	+	N	+	+	+	+	+	N	+	+	+	+	+	+	+		
18. Integrate hazard mitigation measures into the Comprehensive Plan Update.	+	+	+	+	+	+	-	N	+	+	+	+	+	+	+	+	+	+	+	+	+		
19. Encourage low-impact design in order to reduce surface water flows.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	+		

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20. Revise and adopt an updated wetland local law and map.	+	+	+	+	+	+	-	N	+	+	+	+	+	+	+	N	+	+	+	+
21. Make available a GIS link on the Town website identifying floodplain and repetitive loss areas.	+	+	+	+	+	+	-	+	+	+	+	+	N	+	+	+	N	+	+	+
22. Revise, strengthen, and adopt a steep slope protection law.	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	N	+	+	+	+
23. Closely monitor the placement and maintenance of trees on public property and rights-of-way.	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	N	N	N	N	N
24. Partner with utility providers to incorporate hazard mitigation measures into their maintenance operations and capital plans.	+	+	+	+	+	+	-	+	+	+	+	+	N	+	+	N	-	N	N	N

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25. Provide information to residents and businesses regarding water conservation measures.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	+	+	+	+
26. Develop a public information outreach program for residents, businesses, community groups and organizations including area colleges addressing concerns and risks of natural hazards as well as preparation and preventative measures.	+	+	+	+	+	+	+	+	+	+	+	+	N	+	+	+	+	+	+	+

Prioritization and Benefit/Cost Review

Prioritization

Section 201.c.3.iii of 44 CFR requires that the review of alternative mitigation actions include a description of how they will be prioritized including a benefit/cost review. The Town of Harrison's Planning Committee, along with their consultant, researched the methodology included in other recently approved Hazard Mitigation Plans. Accordingly, the mitigation actions identified earlier in this section were prioritized according to the criteria defined below.

High Priority: A project that meets multiple goals and objectives, benefits exceed cost, has funding secured under existing programs or authorizations, or is grant-eligible, and can be completed in 1 to 5 years (short-term project) once the project is funded.

Medium Priority: A project that meets at least one plan goal and objective, benefits exceed cost, funding has not been secured and would require a special funding authorization under existing programs, grant eligibility is questionable, and can be completed in 1 to 5 years once the project is funded.

Low Priority: A project that will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, and project is not grant-eligible and/or timeline for completion is considered long term (5 to 10 years).

Benefit/Cost Criteria

As part of the prioritization process, Section 201.6(c)(3)(iii) of 44 CFR requires that attention be paid on the extent to which benefits are maximized according to a cost benefit review of the mitigation actions and their associated costs. A benefit-cost analysis is a method for determining the potential positive effects of a specific mitigation action and comparing them to the cost of the action.

As described below this benefit/cost analysis did not include the level of detail required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A more qualitative approach was used for a variety of reasons including the timing and available funding for implementation of the project as the associated costs and benefits could change dramatically over time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed.

Ratings of high, medium, or low was assigned to the costs and benefits of the mitigation actions and are defined below.

Cost Rating Definition

High: Existing funding levels are not adequate to cover the costs of the proposed project and would require an increase in revenue through an alternative source (for example, bonds, grants, and fee increases) to implement.

Medium: The project could be implemented with existing funding 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.

Low: The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program.

Benefit Rating Definition

High: Project will have an immediate impact on the reduction of risk exposure to life and property.

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.

Low: Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

If the Town decides to seek funding for projects from FEMA's HMGP or PDM programs the required detailed benefit/cost analysis will be done as part of the application preparation and submission. The Town intends to pursue an overall mitigation strategy with benefits that exceeds costs. For projects not seeking financial assistance from grant programs that require a detailed cost/benefit analysis, "benefits" will be evaluated according to parameters that meet its needs and the goals and objectives of this plan. The prioritization of mitigation actions will also be reviewed and updated as needed annually as part of the plan maintenance strategy described in Section 7 of this plan.

Table 6-3 presents the prioritization of alternate mitigation actions by the methodology described above. The prioritization evaluation took into consideration the number of objectives met; cost/benefit analysis, and the availability of funding.

Table 6-3 Prioritization of Alternative Mitigation Actions

Mitigation Action #	Applies to New (N) and/or Existing (E) Structures	Goals & Objectives	# of Objectives Met	Benefits	Costs	Cost/Benefit (Y/N)	Grant Eligible (Y/N)	Can Project Be Funded under Existing Programs/Budgets (Y/N)	Priority
1.	NA	1.1,2.1,2.2,3.2	4	M	L-M	Y	N	Y	M
2.	N,E	1.6,2.1,2.2,2.4,3.1	5	M	L	Y	N	Y	M-L
3.	N,E	1.1,2.1,2.2,3.1,3.2	5	M	L	Y	N	Y	M
4.	N,E	1.1,1.4,1.6,2.1	4	M	L	Y	N	Y	H
5.	N,E	1.1,1.4,1.6,2.1	4	M	M	Y	N	Y	H
6.	E	2.1,2.2,2.4,3.2	4	M	M	Y	N	N	M
7.	NA	1.1,2.1,3.2	3	M	L	Y	N	N	H
8.	N,E	1.1,1.2	2	M	L	Y	N	Y	H
9.	N,E	1.1,2.1,2.2,3.2,4.1	5	H	L	Y	N	Y?	H
10.	N,E	1.1,2.1,2.2,3.2,5.5	5	M	L	Y	Y	N	L-M
11.	NA	1.1,2.3,3.2,3.3	4	M	L	Y	N	Y?	M-H
12.	NA	1.1,2.1,2.2,3.2,5.2,5.3	6	M	L	Y	N	Y	H
13.	NA	1.1,1.4,3.2,5.1	4	M-H	H	Y	Y	N	M
14.	NA	2.3,3.2	2	L	L	Y	N	Y	M-H
15.	NA	1.1,2.1,2.2,3.2	4	M	M-H	Y	Y	N	M
16.	NA	1.1,2.1,2.2,3.1,3.2	5	L	L-M	Y	N	Y	H
17.	N,E	1.1,1.3,1.4,5.1,5.2,5.4	6	H	L-M	Y	N	Y	M
18.	N,E	1.1,1.2,1.5,4.1,4.2,5.2,5.3	7	M	L-M	Y	N	N	M
19.	N,E	1.2,1.5,4.1,4.2	4	M	L-M	Y	N	Y	M
20.	N,E	1.2,1.5,4.1,4.2	4	M	L-M	Y	N	N	M
21.	NA	1.2,5.2,5.3	3	M	L-M	Y	N	Y	H
22.	N,E	1.2,1.5,4.1,4.2	4	M	L-M	Y	N	N	M
23.	N,E	1.1,2.1,2.2,3.2	4	H	L	Y	N	Y	H
24.	NA	1.1,2.1,2.2,3.2,4.2,5.4	6	M	L	Y	N	Y	H
25.	NA	1.1,5.1,5.2,5.4,5.5	5	H	L	Y	N	Y	H
26.	N,E	1.1,1.3,5.1,5.2,5.4,5.5	6	H	L-M	Y	N	Y	M-H

Capability Assessment

Performing a Capability Assessment is an important part of preparing a hazard mitigation plan. A mitigation planning Capability Assessment consists of taking an in-depth look at community mechanisms (such as plans, codes, ordinances, etc.) that can affect the successful implementation of identified and prioritized mitigation actions. It provides information that can be used to develop an approach for Plan integration (the step of identifying how the plan, once it is adopted, will tie into existing plans, policies, regulations, and procedures), who in the jurisdiction will take the lead on moving forward with the mitigation actions, and the administrative, technical, regulatory and fiscal resources in the municipality.

FEMA has developed local hazard mitigation capability questionnaires that assist the community in identifying its legal and regulatory authority, administrative, technical and fiscal resources. Tables 6-4 through 6-6 represent the Capability Assessment for the Town/Village of Harrison.

Table 6-4 Legal and Regulatory Authority

Regulatory Tools (ordinances, codes, plans)	Local Authority (Y/N)	Does State Prohibit (Y/N)	Higher Level Jurisdiction Authority (Y/N)	Codes, Ordinances and Plans
Building Code	Y	N	Y	Chapter 103 Building construction, Chapter 105 Building Enforcement, Chapter 109 Unsafe Buildings of the Harrison Town Code
Zoning Ordinance	Y	N	N	Chapter 235
Subdivision ordinance or regulations	Y	N	N	Chapter 204
Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire, hazard setback requirements)	Y	N	N	Chapter 126 Environmental Quality Review, Chapter 130 Stormwater Management & Erosion & Sediment Control, Chapter 131 Illicit Discharge, Chapter 133 Excavation & Soil Removal, Chapter 139 Filling & Grading, Chapter 146 Flood Damage Prevention, Chapter 149 Freshwater Wetlands, Chapter 199 Steep Slope Protection, Chapter 220 Trees, Chapter 230 Water Pollution
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N	N	N	No

Site plan review requirements	Y	N	N	Section 235-71 of the Zoning Ordinance
General or Comprehensive Plan	Y	N	N	2006 Update Draft
A capital improvements plan	Y	N	N	Town only adopts a 1 year capital budget
An economic development plan	N	N	N	No
An emergency response plan	Y	N	N	Preparation in process by Town/Village
A post-disaster recovery plan	N	N	N	No
A post-disaster recovery ordinance	N	N	N	No
Real estate disclosure requirements	N	N	N	No

Table 6-5 Administrative and Technical Capability

Staff/Personnel Resources	Yes/No	Department and Position
Planner (s) or engineer(s) with knowledge of land development and land management practices	Yes	Building Inspector and Assistant Building Inspectors; Town-Village Engineer/Commissioner of Public Works; Town/Village Planning Consultant
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Building Inspector and Assistant Building Inspectors, Code Enforcement Officer; Town-Village Engineer/Commissioner of Public Works
Planner(s) or engineers(s) with an understanding of natural and/or human caused hazards	Yes	Town-Village Engineer/Commissioner of Public Works; Town/Village Planning Consultant
Floodplain manager	Yes	Building Inspector ; Town-Village Engineer/Commissioner of Public Works

Surveyors	No	The Town/Village will contract for these services as needed
Staff with education or expertise to assess the community's vulnerability to hazards	Yes	Building Inspector; Town-Village Engineer/Commissioner of Public Works; Fire Marshall & Fire District Chiefs; Police Commissioner
Personnel skilled in GIS and/or HAZUS	Yes	Assistant Town/Village Engineer; Westchester County GIS Department; Outside Consultants
Scientists familiar with the hazards of the community	No	The Town/Village will contract with consultants as needed
Emergency manager	Yes	Police Commissioner; Fire Marshall & Fire District Chiefs; Town/Village Engineer/Commissioner of Public Works
Grant writer	Yes	Town-Village Engineer/Commissioner of Public Works; Outside Consultants

Table 6-6 Fiscal Capability

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDGB)	The Town/Village is a member of the Westchester Urban County Consortium and is eligible for CDBG funding. Eight census block groups were identified as HUD low and moderate income areas.
Capital Improvements project funding	The Town/Village Board annually approves a Capital Budget for a single fiscal year.
Authority to levy taxes for specific purposes	The Town/Village Board establishes an annual tax rate as part of the budget process. The Board can also authorize the issuance of Tax Anticipation Notes and Serial Bonds if necessary.
Fees for water, sewer, gas or electric service	Water rates are set by the Westchester Joint Water Works of which the Town is a member. Sewer district taxes are levied by Westchester County. All other utility services are provided

	by private companies.
Impact fees for home buyers or developers for new developments/homes	None, other than recreation fees which can be assessed as part of new subdivisions as permitted by NYS law.
Incur debt through general obligation bonds	The Town/Village Board has the authority to issue general obligation bonds.
Incur debt through special tax bonds	The Town/Village Board can issue various bonds and notes to finance improvements and address emergencies.
Incur debt through private activity bonds	Not permitted in New York State
Withhold spending in hazard-prone areas	The Town/Village Board as part of its budgeting process is responsible for determining how and where funds are allocated and spent.
Other	

National Flood Insurance Program and Community Rating System

The National Flood Insurance Program (NFIP) provides federally backed flood insurance that encourages communities to enact and enforce floodplain regulations. To be covered by a flood insurance policy, a property must be in a community that participates in the NFIP. To qualify for the program, a community adopts and enforces a floodplain management ordinance to regulate development in flood hazard areas. The Town of Harrison participates in the NFIP.

The NFIP's Community Rating System (CRS) was implemented in 1990 as a program recognizing and encouraging floodplain management activities that exceed the minimum NFIP standards. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the goals of CRS.

The Town does not currently participate in the CRS program but intends to consider joining the program as one of its mitigation strategies (mitigation strategy #5). In addition, the Plan's risk assessment which provides historical flood information and the mitigation strategies developed as part of this Plan meet the Floodplain Management Plan criteria under Activity 510 in the CRS program and will be utilized in the development of the Town's CRS Program.

Implementation

The Implementation Strategies found in Table 6- 7 identifies the following categories of information for each mitigation action that will guide Harrison in the implementation and administration of the actions: hazard description, lead and supporting agencies, timeframe, cost, and funding source. It also serves to coordinate the various departments involved to avoid duplicating or conflicting efforts. The Implementation Table contains a variety of prioritized actions that mitigate the effects of natural hazards on the population and property of the Town.

Table 6-7 Implementation Strategies

Hazard	Mitigation Action	Lead Agency	Supporting Agency	Project Timeline (Years)	Estimated Project Cost	Possible Funding Source	FEMA Category P= prevention PP = property protection PE= public education NR= natural resources ES= emergency services SP=structural projects	Goals And Objectives
All	1. Conduct inventory and assessment of public facilities and populations that may be vulnerable to natural hazards.	DPW TE	PL CS WCDP	<1	L	Town	P,PP,ES,SP	1.1,2.1,2.2, 3.2
All	2. Revise Town’s capital budgeting process to include 3-5 year capital programming in order to identify priorities for mitigation measures and outside funding for natural hazards that impact Town facilities, equipment, infrastructure and at-risk populations.	Town Board	DPW Police Fire EMS	1-2	L	Town	P,PP	1.6,2.1,2.2, 2.4,3.1
Flood, Severe Storm, Severe Winter Storm	3. Identify and pursue funding sources for flood abatement and drainage improvement projects involving public facilities, equipment, and infrastructure.	DPW TE	NYS DEC WCDP SEMO	Ongoing	L	Town CIP HMGP PDM NYS DEC	SP	1.1,2.1,2.2, 3.1,3.2
Flood, Severe Storm, Severe Winter Storm	4. Identify and pursue funding sources and other incentives to encourage and monitor flood resistant construction measures and practices for new construction and renovations in floodplains and repetitive flood loss areas.	TE BLDG	DPW PL	1-2	L	Town	P,PP	1.1,1.4,1.6, 2.1
Flood, Severe Storm, Severe Winter Storm	5. Consider joining the CRS (Community Rating System) program	TE BLDG	DPW PL SEMO	2-3	L	Town	P,PP,S	1.1,1.4,1.6, 2.1

Hazard	<i>Table 6-7 Implementation Strategies</i> Mitigation Action	Lead Agency	Supporting Agency	Project Timeline (Years)	Estimated Project Cost	Possible Funding Source	FEMA Category P= prevention PP = property protection PE= public education NR= natural resources ES= emergency services SP=structural projects	Goals And Objectives
Flood, Severe Storm, Severe Winter Storm, Earthquake, Drought	6. Integrate hazard resistant mitigation measures into the repair and rehabilitation of Town facilities and infrastructure.	TE DPW	BLDG	2-3	M	Town	PP,SP	2.1,2.2,2.4, 3.2
Flood, Severe Storm, Severe Winter Storm, Earthquake, Extreme Heat	7. Assess the capability to shelter residents during natural hazard events including the availability of adequate back-up power for cooling and heating at critical facilities.	TE DPW	BLDG School District WOEM Red Cross	1-2	L	Town County SEMO	ES	1.1,2.1,3.2
Earthquake	8. For new or remodeled buildings enforce strict compliance with NYS Building Code earthquake construction recommendations.	BLDG	TE	1-3	L	Town	P	1.1,2.1
Flood, Severe Storm, Severe Winter Storm	9. Maintain and enhance cleaning of stormwater collection and conveyance system especially in flood prone areas.	DPW	DPW WC DPW NYS DOT	Ongoing	M	Town County NYS	P,PP	1.1,2.1,2.2, 3.2,4.1
Flood, Severe Storm, Severe Winter Storm	10. Partner with neighboring communities to encourage Westchester County to restore and add flood gauges on the Blind Brook, Beaver Swamp Brook, Brentwood Brook, and Mamaroneck River.	TE DPW	WC DPW WCOEM Other Towns & Villages	2-3	M-H	Town WCDPW, WCOEM	P,ES	1.1,2.1,2.2, 3.2,5.5

Hazard	<i>Table 6-7 Implementation Strategies</i> Mitigation Action	Lead Agency	Supporting Agency	Project Timeline (Years)	Estimated Project Cost	Possible Funding Source	FEMA Category P= prevention PP = property protection PE= public education NR= natural resources ES= emergency services SP=structural projects	Goals And Objectives
All	11. Update and adopt an emergency response plan.	Police	EMS DPW	1-2	L	Town	P,PP,ES	1.1,2.3,3.2, 3.3
Flood, Severe Storm, Severe Winter Storm, Extreme Heat	12. Investigate enhanced weather forecasting and warning systems.	Fire DPW	Town Board	1-2	M	Town SEMO WCOEM	ES	1.1,2.1,2.2, 3.2,5.2,5.3
Flood, Severe Storm, Severe Winter Storm, Earthquake, Extreme Heat	13. Implement reverse 911 for Town.	Police	Fire, EMS DPW, Town Board	3-4	H	Town SEMO FEMA	ES,PE	1.1,1.4,3.2, 5.1
Flood, Severe Storm, Severe Winter Storm, Dam Failure	14. Apply for new Town-wide communication frequencies to include all emergency services.	Police	Fire EMS DP W	1-2	L	Town	ES	3,3.2
Flood, Severe Storm, Severe Winter Storm, Earthquake, Extreme Heat	15. Upgrade and acquire new portable generators for emergency service personnel.	Fire	Police DPW	1-2	M-H	Town FEMA SEMO	ES	1.1,2.1,2.2 3.2
All	16. Continue to support and provide for training opportunities for emergency service personnel.	Town Board	Police Fire EMS	Ongoing	L-M	Town County SEMO FEMA	ES,P	1.1,2.1,2.2,3. 1,3.2

Hazard	<i>Table 6-7 Implementation Strategies</i> Mitigation Action	Lead Agency	Supporting Agency	Project Timeline (Years)	Estimated Project Cost	Possible Funding Source	FEMA Category P= prevention PP = property protection PE= public education NR= natural resources ES= emergency services SP=structural projects	Goals And Objectives
All	17. Prepare and provide informational materials on natural hazard preparation for the Town's website, Cable TV access channel, schools, community centers, day care centers, senior centers and other community venues.	Town Board Town Clerk TE	DPW DPW BLDG Fire, Police EMS WCOEM	1-2	L-M	Town	PE	1.1,1.3,1.4,5.1,5.2,5.4.1
Flood, Severe Storm, Severe Winter Storm, Earthquake	18. Integrate hazard mitigation measures into the Comprehensive Plan Update.	Town Board PL,PB	TE BLDG WCDP	1-2	L-M	Town	P,NR	1.1,1.2,1.5,4.1,4.2,5.2,5.3
Flood, Severe Storm	19. Encourage low-impact design in order to reduce surface water flows.	TE	PL BLDG PB	1-2	L	Town	P,PP,NR	1.2,1.5,4.1,4.2
Flood, Severe Storm, Severe Winter Storm, Drought	20. Revise and adopt an updated wetland local law and map.	PL	TE, PB BLDG	2-3	M	Town	P,PP,NR	1.2,1.5,4.1,4.2
Flood, Severe Storm	21. Make available a GIS link on the Town website identifying floodplain and repetitive loss areas.	TE	IT Dept. WCGIS	Ongoing	M	Town	P,PE	1.2,5.2,5.3
Flood, Severe Storm	22. Revise, strengthen, and adopt a steep slope protection law.	TE, PL	BLDG PB	2-3	M	Town	P,PP,NR	1.2,1.5,4.1,4.2

Hazard	<i>Table 6-7 Implementation Strategies</i> Mitigation Action	Lead Agency	Supporting Agency	Project Timeline (Years)	Estimated Project Cost	Possible Funding Source	FEMA Category P= prevention PP = property protection PE= public education NR= natural resources ES= emergency services SP=structural projects	Goals And Objectives
Severe Storm, Severe Winter Storm, Earthquake	23. Closely monitor the placement and maintenance of trees on public property and rights-of-way.	DPW	BLDG PL	Ongoing	M	Town	P,PP,NR	1.1,2.1,2.2, 3.2
Flood, Severe Storm, Severe Winter Storm, Earthquake, Extreme Heat	24. Partner with utility providers to incorporate hazard mitigation measures into their maintenance operations and capital plans.	DPW	Con Ed WJWW Cablevision	2-3	L	Town	P,PP	1.1,2.1,2.2, 3.2,4.2,5.4
Drought	25. Provide information to residents and businesses regarding water conservation measures.	Town Clerk Town Board DPW	WJWW WC Water Agency	Ongoing	L	Town	P,PE	1.1,5.1,5.2, 5.4,5.5
All	26. Develop a public information outreach program for residents, businesses, community groups and organizations including area colleges addressing concerns and risks of natural hazards as well as preparation and preventative measures.	Town Board Town Clerk DPW, TE	Police Fire EMS CS WCOEM	2-3	L-M	Town	P,PP,PE	1.1,1.3,5.1, 5.2,5.4,5.5

Table 6-7 Implementation Strategies (Continued)

Legend

BLDG	=	Town Building Inspector/Building Department
CS	=	Town Community Services Department
DPW	=	Town Department of Public Works
FEMA	=	Federal Emergency Management Agency
HMGP	=	Hazard Management Grant Program
IT	=	Town Information Technology Department
NYS DEC	=	NYS Department of Environmental Conservation
NYSDOT	=	NYS Department of Transportation
PB	=	Planning Board
PDM	=	Pre-Disaster Mitigation
PL	=	Town Planner
SEMO	=	NYS Emergency Management Office
TE	=	Town Engineer
WC	=	Westchester County
WCDP	=	Westchester County Department of Planning
WCGIS	=	Westchester County GIS Office
WCOEM	=	Westchester County Office of Emergency Management

Estimated Project Cost Key

L	=	Low: Less than \$10,000
M	=	Medium: Between \$10,000 and \$100,000
H	=	High: Over \$100,000