9.31 Town/Village of Harrison

This section presents the jurisdictional annex for the Town/Village of Harrison. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the Town/Village participated in the planning process; an assessment of the Town/Village of Harrison's risk and vulnerability; the different capabilities utilized in the Town/Village; and an action plan that will be implemented to achieve a more resilient community.

9.31.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Town/Village of Harrison's hazard mitigation plan primary and alternate points of contact. The Town/Village of Harrison followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Town/Village departments, including: Engineering and Administration. The Town/Village Engineer represented the community on the Westchester County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.31-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael Amodeo, P.E., CFM, Town/Village Engineer/Engineering Department Address: Alfred F. Sulla, Jr. Municipal Building, 1 Heineman Place Harrison, NY 10528 Phone Number: (914)-670-3102 Email: mamodeo@harrison-ny.gov and engineering@harrison-ny.gov	Name/Title: Jackie Greer, Town Clerk Address: Alfred F. Sulla, Jr. Municipal Building, 1 Heineman Place Harrison, NY 10528 Phone Number: (914)-670-3030 Email: jgreer@harrison-ny.gov
NFIP Floodplain Administrator	
Name/Title: Michael Amodeo, P.E., CFM, Town/Village Engineer/Engineering Department Address: Alfred F. Sulla, Jr. Municipal Building, 1 Heineman Place Harrison, NY 10528 Phone Number: (914)-670-3102 Email: mamodeo@harrison-ny.gov	
Additional Contributors	
Name/Title: Michael Amodeo, P.E., CFM, Town/Village Engineer/Engineering Department Method of Participation: Provided information on past events, capabilities, NFIP administration services, status of previous actions, permitting, and provided feedback on hazard rankings. Contributed to mitigation strategy. Reviewed annex.	
Name/Title: Megan Pierroz, Assistant Engineer Method of Participation: Contributed to the mitigation strategy. Reviewed annex.	

9.31.2 Municipal Profile

The Town/Village of Harrison is situated in southeastern Westchester County, approximately 20 miles northeast of New York City. Harrison is bordered by the Town of North Castle to the north; the Town of Rye and the Villages of Rye Brook and Port Chester to the east, the City of Rye to the southeast, the Town of Rye and the

Village of Mamaroneck to the south, the Town of Mamaroneck to the southwest, and the City of White Plains to the west.

The Town/Village of Harrison consists of three sections which includes West Harrison in the northeast section of the Town, Purchase in the northwest section of the Town, and Harrison in the south section of the Town.

According to the U.S. Census, the 2010 population for the Town/Village of Harrison was 27,472. The estimated 2019 population was 28,135, a 2.4 percent increase from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 5.6 percent of the population is 5 years of age or younger and 14.7 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.31.3 Jurisdictional Capability Assessment and Integration

The Town/Village of Harrison performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in this Jurisdictional Capability Assessment (Section 9.31.3). The Town/Village of Harrison's identified opportunities for integration of mitigation concepts to be incorporated into municipal procedures are included in the updated mitigation strategy.

Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Town/Village of Harrison. The comment field provides information as to where hazard mitigation has been integrated.

Table 9.31-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations					
Building Code	Yes	Yes	Chapter 103 Building Construction, Chapter 105 Building Enforcement, Chapter 109 Unsafe Buildings	State and Local	Building Department
How does this reduce risk? • Chapter 103 Building Construction: It is declared to be the public policy of the Town of Harrison that the town's building codes shall be in conformance in all respects with the New York State Uniform Fire Prevention and Building Code, as referenced in					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Article 18 of the New York State Executive Law, so that a single adequate, enforceable code exists which establishes standards for, among other things, the construction, maintenance and use of materials in buildings. • Chapter 105 Building Enforcement: This chapter provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the Town of Harrison. This chapter is adopted pursuant to § 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, other state law, or other section of this chapter, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this chapter. • Chapter 109 Unsafe Buildings: The purpose of this chapter is to promote the public health, safety and general welfare of the residents of the Town of Harrison and the conservation of property and property values and to eliminate safety and health hazards. All buildings or structures which are structurally unsafe, dangerous, unsanitary or not provided with adequate egress or which, in relation to existing use, constitute a hazard to safety or health by reason of inadequate maintenance, dilapidation, obsolescence or abandonment are, severally, for the purpose of this chapter, unsafe buildings. All such buildings and structures are hereby declared to be illegal and are prohibited and shall be abated by repair and rehabilitation or by demolition and removal in accordance with the procedures of this chapter.					
Zoning/Land Use Code	Yes	No	Chapter 235 Zoning	Local	Building Department, Zoning Board Planning Board
How does this reduce risk? • Establishes an amended Comprehensive Zoning Plan for the Town of Harrison, which plan is set forth in the text and map that constitutes this chapter. Said amended plan is adopted in the interest of the protection and promotion of the public health, safety and welfare, shall be deemed to specifically include the following purposes relating to hazard mitigations: o The facilitation of the efficient and adequate provisions of public facilities and services. o The assurance of adequate sites for residence and commerce, including protection from flood damage. o The prevention and reduction of traffic congestion so as to promote efficient and safe circulation of vehicles and pedestrians. o The maximum protection of residential areas. o The gradual elimination of nonconforming uses. o The encouragement of flexibility in the design and development of land in such a way as to promote the most appropriate use of lands to facilitate the adequate and economical provision of streets and utilities and to preserve the natural and scenic qualities of open lands. o The protection and preservation of the natural environment and its ecological systems. o The assurance of adequate provision of safety and health features in the construction and use of structures and land.					
Subdivision Ordinance	Yes	No	Chapter 204 Subdivision of Land	Local	Planning Board
How does this reduce risk? • The Planning Board declares that these regulations for the subdivision of land for various purposes are promulgated to provide for the orderly growth and coordinated development of the municipality and to assure the comfort, convenience, safety, health and welfare of its people, and further, that the approval of such subdivision shall be based on the following considerations: o A. Conformance with the various parts of the Master Plan and Zoning Ordinance o B. Recognition of a desirable relationship to the general land form, its topographic and geologic character, to natural drainage and ecological concerns. o C. Recognition of desirable standards of subdivision design for pedestrian and vehicular traffic, surface water runoff, utility services and building sites for the land use contemplated. o D. Encouragement of flexible subdivision design to promote the planning objectives of the Master Plan, to realize development and maintenance economies and to provide for a variety of housing types. o E. Provision of such facilities as are desirable adjuncts to the contemplated use, such as parks, recreation areas, school sites, firehouses and off-street parking. o F. Preservation of such natural resources and assets as lakes, ponds, streams, marshes, flora, fauna, general scenic beauty and historic features of the municipality. • The subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas. • The regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources.					
Site Plan Ordinance	Yes	No	Section 235-71 of the Zoning Ordinance	Local and County	Planning Board, Zoning Board, Engineering and Building Departments
How does this reduce risk? • Site plan provisions are intended to implement the development characteristics projected in the Master Plan and to secure compliance with the requirements and standards set forth in this chapter and with accepted professional design practice for such site improvements as grading, drainage, sidewalks, curbs, parking, landscaping, fences and driveways.					
Stormwater Management Ordinance	Yes	Yes	Chapter 130 Stormwater Management Erosion & Sediment Control,	Local	Engineering Department and Public Works

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
			Chapter 131 Illicit Discharge		
How does this reduce risk? • The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in § 130-3 hereof. This local law seeks to meet those purposes by achieving the following objectives: o A. Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; o B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; o C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels; o D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; o E. Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and o F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety. o G. Encourage the use of green infrastructure practices to control stormwater runoff such as protecting natural areas, reducing impervious cover, and runoff reduction techniques to the maximum extent practicable. • Chapter 131 Illicit Discharge: The purpose of this law is to provide for the health, safety, and general welfare of the citizens of the Town/Village of Harrison through the regulation of nonstormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are: o A. To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user. o B. To prohibit illicit connections and discharges to the municipal separate storm sewer system. o C. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance.				
Post-Disaster Recovery/ Reconstruction Ordinance	No	No	-	-	-
How does this reduce risk?					
Real Estate Disclosure	Yes	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
How does this reduce risk? • In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of $500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.					
Growth Management	Yes	No	Master Plan adopted 2013	Local	Planning Board and Town Board
How does this reduce risk? • Growth management is identified within the Master Plan.					
Environmental Protection Ordinance	Yes	Yes	Chapter 126 Environmental Quality Review, Chapter 133 Excavation and Soil Removal, Chapter 139 Filling and Grading, Chapter 149 Freshwater Wetlands, Chapter 199 Steep Slope Protection, Chapter 220 Trees, Chapter 230 Water Pollution	Local	Planning Board, Town Board, Building Department, Engineering Department
How does this reduce risk? • Chapter 126 Environmental Quality Review: Lays out the requirements for environmental quality review. • Chapter 149 Freshwater Wetlands: It is declared to be the public policy of the Town of Harrison to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom, to prevent the despoliation and destruction of freshwater wetlands and to regulate the development of such wetlands in order to secure the natural benefits of freshwater wetlands, consistent with the					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
general welfare and beneficial economic, social and agricultural development of the Town of Harrison. It is further declared to be the policy of the Town Board to exercise its authority pursuant to Article 24 of the State Environmental Conservation Law, as such Article may, from time to time, be amended. • Chapter 199 Steep Slope Protection: It is the intent of this chapter to ensure preservation wherever possible and careful review and regulation, including stringent mitigation measures, of disturbance of soil and vegetation on steep slopes where they have been disturbed. The proponent of any activity proposed for hilltops, ridgelines, or steep slopes shall demonstrate that the impacts on the functions and essential characteristics of such areas can be effectively minimized. • Chapter 220 Trees: Prohibits the killing, cutting, or destroying of trees, guides the removal of dangerous trees and the trimming of trees near power lines. • Chapter 230 Water Pollution: It is declared to be the public policy of the Town of Harrison to preserve, protect and conserve local waters (as hereinafter defined) in the Town of Harrison that provide drinking water, to prevent the despoliation and destruction of such local waters and to regulate the discharge or runoff of pollutants into such local waters to avoid contamination of such local waters and to ensure a future supply of safe and healthful drinking water, consistent with the protection of the public health, safety and general welfare of the people and property of the Town of Harrison. It is further declared to be the policy of the Town Board of the Town of Harrison to exercise its authority pursuant to § 10 of the New York State Municipal Home Rule Law, Section 313 of the Federal Water Pollution Control Act (33 U.S.C. § 1323), Section 319 of the Federal Water Pollution Control Act (33 U.S.C. § 1329), and Safe Water Drinking Act's Surface Water Treatment Rule, 54 Fed. Reg. 27486 (June 29, 1989), as the same may be amended from time to time.					
Flood Damage Prevention Ordinance	Yes	Yes	Chapter 146 Flood Damage Prevention	Federal, State, County and Local	Town Board, Engineering Department, Assessor and Building Department
How does this reduce risk? • It is the purpose of this local law to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: o A. regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; o B. require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; o C. control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of flood waters; o D. control filling, grading, dredging and other development which may increase erosion or flood damages; o E. regulate the construction of flood barriers that will unnaturally divert flood waters or that may increase flood hazards to other lands, and; o F. qualify and maintain for participation in the National Flood Insurance Program. • BFE+2 feet for all construction in the SFHA (residential and non-residential) • Cumulative substantial improvements defined over previous 10 years.					
Wellhead Protection	No	No	-	-	-
How does this reduce risk?					
Emergency Management Ordinance	No	No	-	-	-
How does this reduce risk?					
Climate Change Ordinance	No	No	-	-	-
How does this reduce risk?					
Other	No	-	-	-	-
Planning Documents					
Comprehensive Plan	Yes	No	Town/ Village of Harrison Comprehensive Plan Update, 2013	Local	Planning Board and Town Board
How does this reduce risk? • This Comprehensive Plan for the Town/Village of Harrison has been prepared to update the existing 1988 Plan, to better reflect the current planning framework for Harrison. Many of the 1988 recommendations have been enacted, and some are in progress. This update process, which began in late 2004, focuses on three key topics: o Resolving remaining planning issues since the 1988 Update; o Identifying and resolving critical new issues; and o Incorporating any new town projects into the plan. • This plan is a guide to Harrison's decision makers on major planning issues and their solutions (or options). Data and analyses are updated where necessary. Following the format as laid down by the 1988 update, this plan provides specific geographically based					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
planning action guides for the downtown Central Business District, downtown Harrison, West Harrison (Silver Lake and Park Lane), southern Harrison, Purchase and the Platinum Mile.					
Capital Improvement Plan	Yes	No	Annual Capital Budget	Local	Public Works, Engineering and Town Board
How does this reduce risk? • Town only adopts a 1 year capital budget. Provisions have been made for multi-phase planning of capital projects.					
Disaster Debris Management Plan	No	No	-	-	-
How does this reduce risk?					
Floodplain Management or Watershed Plan	No	No	-	-	-
How does this reduce risk?					
Stormwater Management Plan	No	No	-	-	-
How does this reduce risk? ○					
Open Space Plan	No	No	-	-	-
How does this reduce risk?					
Urban Water Management Plan	No	No	-	-	-
How does this reduce risk?					
Habitat Conservation Plan	No	No	-	-	-
How does this reduce risk?					
Economic Development Plan	Yes	No	Part of Master Plan	Local	Planning Board and Town Board
How does this reduce risk? • Economic development is a component of the Master Plan.					
Shoreline Management Plan	Yes	Yes, in jurisdictions with CEHA areas	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	State, Local	Town Board
How does this reduce risk?					
Community Wildfire Protection Plan	No	No	-	-	-
How does this reduce risk?					
Community Forest Management Plan	No	No	-	-	-
How does this reduce risk?					
Transportation Plan	No	No	-	-	-
How does this reduce risk?					
Agriculture Plan	No	Yes	-	-	-
How does this reduce risk?					
Climate Action/ Resiliency/Sustainability Plan	No	No	-	-	-
How does this reduce risk?					
Tourism Plan	No	No	-	-	-
How does this reduce risk?					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Business/ Downtown Development Plan	No	No	-	-	-
How does this reduce risk?					
Other	No	-	-	-	-
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	Yes	Emergency Response Plan	Local	Town Board, Police Department, and Legal Department
How does this reduce risk? • The current Emergency Response Plan identifies responsibilities for response during hazard events. The Plan could be expanded to include more information on evacuation routes/procedures and sheltering.					
Continuity of Operations Plan	No	No	-	-	-
How does this reduce risk?					
Strategic Recovery Planning Report	No	No	-	-	-
How does this reduce risk?					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	-	-	-
How does this reduce risk?					
Post-Disaster Recovery Plan	No	No	-	-	-
How does this reduce risk?					
Public Health Plan	No	No	-	-	-
How does this reduce risk?					
Other	Yes	No	Mutual Aid Plan in place for entire County	Local, County	OEM
How does this reduce risk? • Mutual Aid Plan provides assistance Countywide.					

Development and Permitting Capability

The table below summarizes the capabilities of the Town/Village of Harrison to oversee and track development.

Table 9.31-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? -If yes, what department is responsible? -If no, what is your process for development?	Yes	Engineering Department provides Land Development approvals, Building Department provides permits, Department of Public Works provides permits
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain Permits
Do you have a buildable land inventory? -If yes, describe. -If no, quantitatively describe the level of buildout in the jurisdiction.	No	80 percent built out

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town/Village of Harrison and their current responsibilities which contribute to hazard mitigation.

Table 9.31-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board is charged with the responsibility of reviewing and approving Subdivisions, Site Plans, Special Exception Uses, Steep Slope Permits and Wetland Permits. Additionally, the Planning Board serves in an advisory role to the Town Board and routinely provides comment and recommendations regarding amendments to the Town's Zoning Ordinance, official map and Subdivision Regulations as well as other regulations pertaining to the development of land within the Town.
Zoning Board of Adjustments	Yes	The Zoning Board of Appeals is charged with deciding on individual variances from the over-all Zoning Code, in such cases where a question of hardship for the property owner is involved. If an application to build is denied by the Building Inspector because it does not conform to the Zoning Ordinance, his decision may be appealed to this Board. The Board is not empowered to make any changes in the Zoning Code; it may only grant Variances.
Engineering Department	Yes	The Engineering Department is responsible for the planning, designing and construction oversight of public works and infrastructure projects funded by the Town/Village of Harrison, including bid preparation and contract administration. The Department also reviews all subdivisions, commercial site development, public improvement proposals and residential site plan applications for technical sufficiency with respect to stormwater regulation and land development compliance, which includes grading, FEMA flood plain development requirements and drainage. The staff is responsible for the operation and maintenance of the Town's GIS data and utilizes the latest computer applications in the creation of various types of maps. The Department acts as staff technical advisors to the Supervisor/Mayor, Town/Village Board, Planning Board and various internal departments and responds to inquiries from Town residents and various public and private agencies.
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	Planning Board serves this function
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Department of Public Works office is the central contact point for residents calling with requests for service (such as roadway repairs, street lighting/signs, trees, sewers and sidewalks). The Highway staff is responsible for the paving, maintenance and repair of all Town roads; the care and maintenance of sidewalks, sewer lines, and storm drains. Snow removal, seasonal curbside leaf pick-up, and the monthly collection of cut and tied brush are also the responsibility of the Highway Division. The care and removal of Town trees and maintenance of

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		Town owned parking lots (resurfacing, sweeping and snow plowing as needed) are also the responsibility of this department. The Parks and Playgrounds Division maintains Town parks and playgrounds. The Street Lighting Division maintains street lighting on all roadways, parking areas and parks in the Town of Harrison.
Construction/Building/Code Enforcement Department	Yes	Building Department. The Building Inspector is responsible for inspecting and approving all construction within the Town, to ensure that such construction meets the Town standards and codes. Building permits are issued for all new commercial and residential buildings in Harrison, as well as any additions, alterations, accessory structures or facilities. Plans and specifications are reviewed for compliance with construction codes and the Zoning Ordinance. The Building Inspector is responsible for issuance of a Certificate of Occupancy. Most residential construction requires approval from the Architectural Review Board. Building permits and applications for sheds, decks, pools, interior alterations are also reviewed, with permits issued and approved by the Building Inspector. New commercial construction and site division requires site plan approval from the Planning Board and Architectural Review Board. In addition, permits are required for fences, driveways, tree removals, signs, awnings, plumbing and electrical work, blasting, temporary structures, special outdoor events, excavation and regrading, fill and trucking, demolition and ADA compliance.
Emergency Management/Public Safety Department	No	-
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Phone Blasts from the Town Supervisor
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Administered by DPW. Includes brining of roadways prone to icing.
Mutual aid agreements	Yes	Countywide Mutual Aid Plan in place.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering and Planning Departments
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering and Building Departments
Planners or engineers with an understanding of natural hazards	Yes	Engineering and Planning Departments
Staff with expertise or training in benefit/cost analysis	Yes	Comptroller's office
Professionals trained in conducting damage assessments	Yes	Engineering and Public Works Departments

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Engineering Department and Information Technology
Scientist familiar with natural hazards	Yes	Engineering Department and staff consultants
Surveyor(s)	No	-
Emergency Manager	Yes	Supervisor
Grant writer(s)	Yes	The Town hires an outside company to manage and write grants.
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

The table below summarizes financial resources available to the Town/Village of Harrison.

Table 9.31-5. Fiscal Capabilities

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	No. HUD is preventing funding to County administrators.
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes – Special assessment districts
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes, mitigation grant programs
Open Space Acquisition funding programs	Yes, Subdivision Fee-in-Lieu
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town/Village of Harrison.

Table 9.31-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.
Public information officer or communications office	Yes	Supervisors Office
Personnel skilled or trained in website development	Yes	The Department of Information Technology provides technology solutions, strategies, and support to meet the needs of all internal Town/Village departments. Providing service and support for all Town/Village systems including Computers, Internet, Network, Web, Email, Servers, Telephone and Mobile Devices.

Outreach Resources	Available? (Yes/No)	Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.
Hazard mitigation information available on your website	Yes	Community Notes
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	Yes	All Boards
Other programs already in place that could be used to communicate hazard-related information	Yes	The Mayor has an email and calling list where he makes announcements regarding events and anything that is impacting the Town/Village.
Warning systems for hazard events	Yes	Phone and email blasts
Natural disaster/safety programs in place for schools	No	-
Other	No	-

Community Classifications

The table below summarizes classifications for community programs available to the Town/Village of Harrison.

Table 9.31-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	Class 7	May 1, 2020
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	2008
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
NYSDEC Climate Smart Community	No		
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:
N/A *Not applicable*
NP *Not participating*
- *Unavailable*

Adaptive Capacity

Adaptive capacity is defined as "the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences" (IPCC 2014). In other words, it describes a jurisdiction's current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction's rating.

Table 9.31-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Disease Outbreak	Moderate
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Severe Storm	Moderate

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Severe Winter Storm	Strong
Wildfire	Moderate
CBRN	Moderate

*Strong Capacity exists and is in use
Moderate Capacity may exist; but is not used or could use some improvement
Weak Capacity does not exist or could use substantial improvement

9.31.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town/Village of Harrison.

Table 9.31-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Town/Village of Harrison	321	949	$5,882,727.30	94

Source: FEMA 7-2021
Notes:
RL Repetitive Loss; SRL Severe Repetitive Loss

Flood Vulnerability Summary and NFIP Compliance

The following table provides a summary of the NFIP program in the Town/Village of Harrison.

Table 9.31-10. Flood Vulnerability Summary and NFIP Compliance

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. • Do you maintain a list of properties that have been damaged by flooding?	Areas prone to flooding in the Town are the low lying areas and areas along the waterways.
Do you maintain a list of property owners interested in flood mitigation? • How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	The Town is currently finishing up a Drainage Manual that will also provide a GIS map showing problem areas.
How do you make Substantial Damage determinations? • How many were declared for recent flood events in your jurisdiction?	The Town/Village follows FEMA guidelines.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	One structure has been elevated. Privately funded.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Current FIRMs do not include some areas. The Town plans to expand flood mapping and establish a Town specific flood map that identifies all flooding sources (riverine, precipitation, urban, over land

NFIP Topic	Comments
	flooding) and use this improved mapping and data to update the Town/Village code. (action 2021-Harrison-009).
NFIP Compliance	
What local department is responsible for floodplain management?	Engineering Department and Building Department
Are any certified floodplain managers on staff in your jurisdiction?	Engineering Department
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Additional training would be beneficial for building inspectors.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	The Town provides permit review, GIS, education/outreach, property inspections and engineering capability.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	The Engineering Department requests the construction cost estimate for the proposed project and obtains the property value from the Assessor to determine if the proposed development is a substantial improvement.
What are the barriers to running an effective NFIP program in the community, if any?	Limited staffing, funding, and flood map limitations.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The Town/Village had a Community Assistance Visit (CAV) on August 1, 2018.
What is the local law number or municipal code of your flood damage prevention ordinance? • What is the date that your flood damage prevention ordinance was last amended?	The Town Code for Flood Damage Prevention can be found under Chapter 146 and was last amended in 2007.
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Yes, the Town participates in the CRS program and exceeds NFIP requirements.
Are there other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Engineering Department reviews all site plans for proposed projects to reduce risks of flooding and to meet the NFIP requirements.
Does your jurisdiction participate in CRS? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	The Town participates in CRS and currently has improved to a Class 7 classification.

9.31.5 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes and Procedures

The Town/Village of Harrison has identified the following routes and procedures to evacuate residents prior to and during an event.

- The current Emergency Response Plan identifies responsibilities for response during hazard events. The Plan could be expanded to include more information on evacuation routes/procedures and sheltering (action 2021-Harrison-003). Currently identified evacuation routes include:
  - Halstead Avenue
  - Harrison Avenue
  - Westchester Avenue
  - Purchase Street
  - North Street
  - Lake Street
  - West Street

Sheltering

The Town/Village of Harrison has identified the following designated emergency shelters within the Town/Village.

Table 9.31-11. Designated Emergency Shelters

Site Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
Legion Hall	210 Halstead Avenue	150	Unknown	Yes	Yes, portable	EMS	-
Mintzer Center Annex	251 Underhill Avenue	150	Unknown	Yes	Yes, portable	EMS	-
Harrison Fire Department	206 Harrison Avenue	Unknown	Unknown	Unknown	Yes	EMS	-
West Harrison Fire Department	95 Lake Street	Unknown	Unknown	Unknown	Yes	EMS	-

Temporary Housing

Each jurisdiction must identify sites for the placement of temporary housing units to house residents displaced by a disaster. The Town/Village of Harrison has identified the following sites suitable for placing temporary housing units.

Table 9.31-12. Temporary Housing Locations

Site Name	Site Address	Capacity (number of sites)	Type	Infrastructure / Utilities Available (water, electric, septic, etc.)	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
The Town/Village has not identified appropriate locations for the placement of temporary housing. The Town/Village will work with Westchester County to identify appropriate regional locations (action 2021-Harrison-006).					

Permanent Housing

Structures located in the regulatory floodplain may need to be relocated due to high flood risk or new properties must be built once severely damaged properties are demolished. Jurisdictions must identify suitable sites currently owned by the jurisdiction and potential sites under private ownership that meet applicable local zoning requirements and floodplain laws. The Town/Village of Harrison has identified the following areas suitable for relocating homes outside of the floodplain.

Table 9.31-13. Permanent Housing Locations

Site Name	Site Address	Capacity (number of sites)	Type	Infrastructure / Utilities Available (water, electric, septic, etc.)	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
The Town/Village has not identified appropriate locations for the placement of permanent housing. The Town/Village will work with Westchester County to identify appropriate regional locations (action 2021-Harrison-006).					

9.31.6 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.31-14 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.31-14. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018		2019		2020	
Number of Building Permits for New Construction Issued Since the previous HMP* (total/within regulatory floodplain)														
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family & Multi-Family	22	0	25	4	29	4	21	4	22	5	35	10	34	4
Other (commercial, mixed-use, etc.)	0	0	1	0	2	0	1	0	2	0	3	0	2	0
Total Permits Issued	**22**	**0**	**26**	**4**	**31**	**4**	**22**	**4**	**24**	**5**	**38**	**10**	**36**	**4**

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
Residences at Corporate Park Drive	Residential	421 units	103-105 Corporate Park Drive	-	Under construction
Wegmans	Retail	132,000 sq ft	106-110 Corporate Park Drive	-	Completed
PepsiCo Master Plan Expansion	Office	141,835	700 Anderson Hill Road	-	Under construction
3 Westchester Park Drive	Residential	450 units	3 Westchester Park Drive	-	Under construction
104 Corporate Park Drive	Office	113,678 sq ft	104 Corporate Park Drive	-	Completed

Harrison Playhouse Lofts	Residential	42 units	230-240 Harrison Avenue	-	Under Construction
MTV/Avalon train station development	Residential	143 units	Halstead Avenue & Harrison Avenue	-	Under Construction
Harrison Commons	Mixed use	26 units	33-55 Calvert Street	-	Under Construction
Harrison High School Improvements	Education	1	255 Union Avenue	-	Completed – expansion of existing structure
Keio Academy of New York	Institution	22,000 sq ft	3 College Road	-	Completed
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
550 Halstead Avenue Multifamily Building	Residential	36 units	550 Halstead Avenue	-	Approved
Brightview Senior Living	Residential	84 units, 169,168 sq ft institution	600 Lake Street	-	Approved
Purchase Professional Park	Office	46,000 sq ft	3040 Westchester Avenue	-	Approved – expansion of existing structure
2700 Westchester Avenue	Residential	TBD	2700 Westchester Avenue	-	Proposed
Webb Avenue	Residential	TBD	Webb Avenue	-	Proposed
SUNY Purchase Senior Learning Community	Residential	385 units	735 Anderson Hill Road	-	Proposed

SFHA Special Flood Hazard Area (1% flood event)
** Only location-specific hazard zones or vulnerabilities identified.*

9.31.7 Jurisdictional Risk Assessment

The hazard profiles in Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Refer to Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) for a detailed summary for the Town/Village of Harrison's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps were generated to illustrate the probable areas impacted within the jurisdiction. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Town/Village of Harrison has significant exposure. The maps also show the location of potential new development, where available. These maps are illustrated below.

Figure 9.31-1. Town/Village of Harrison Hazard Area Extent and Location Map 1

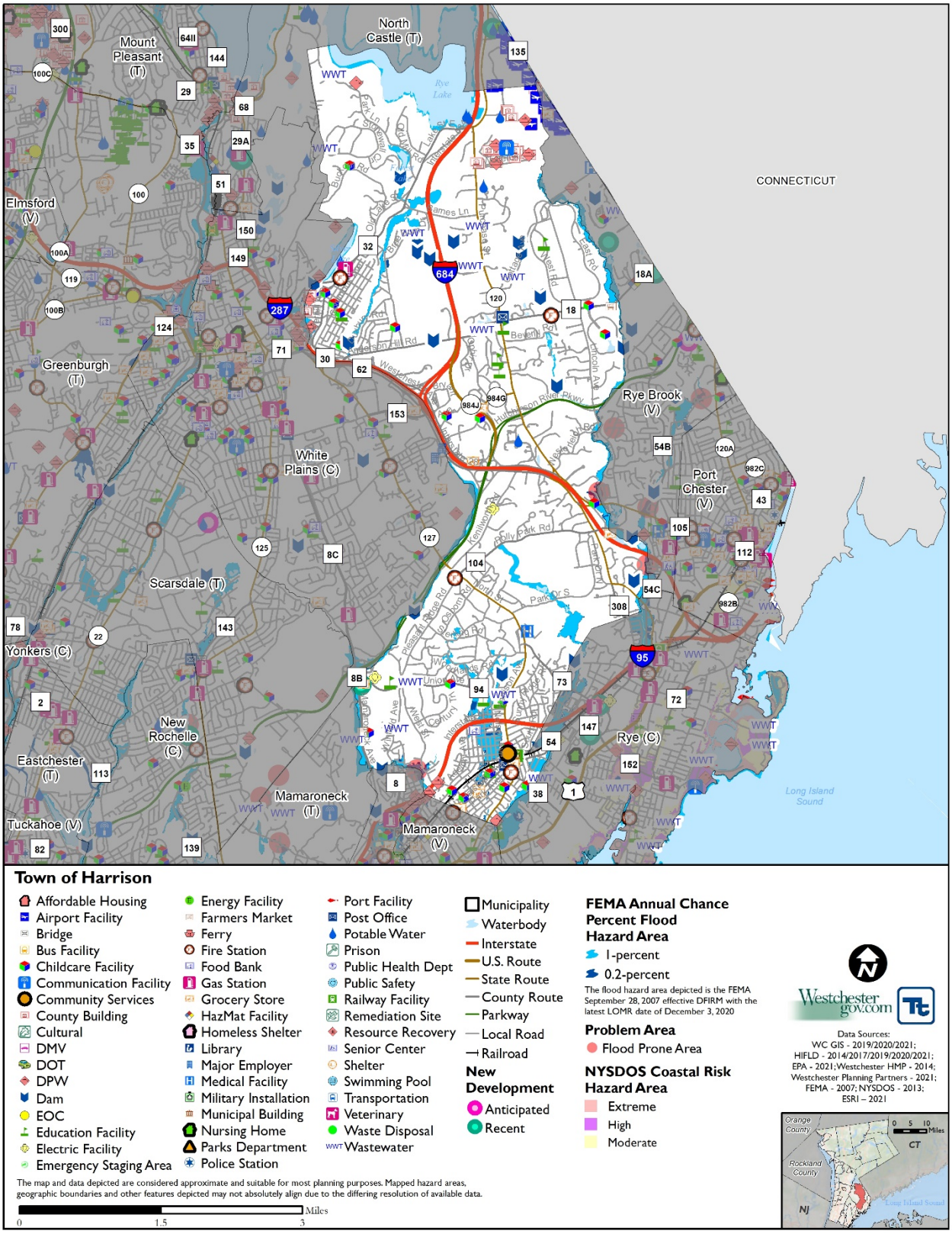


Figure 9.31-2. Town/Village of Harrison Hazard Area Extent and Location Map 2

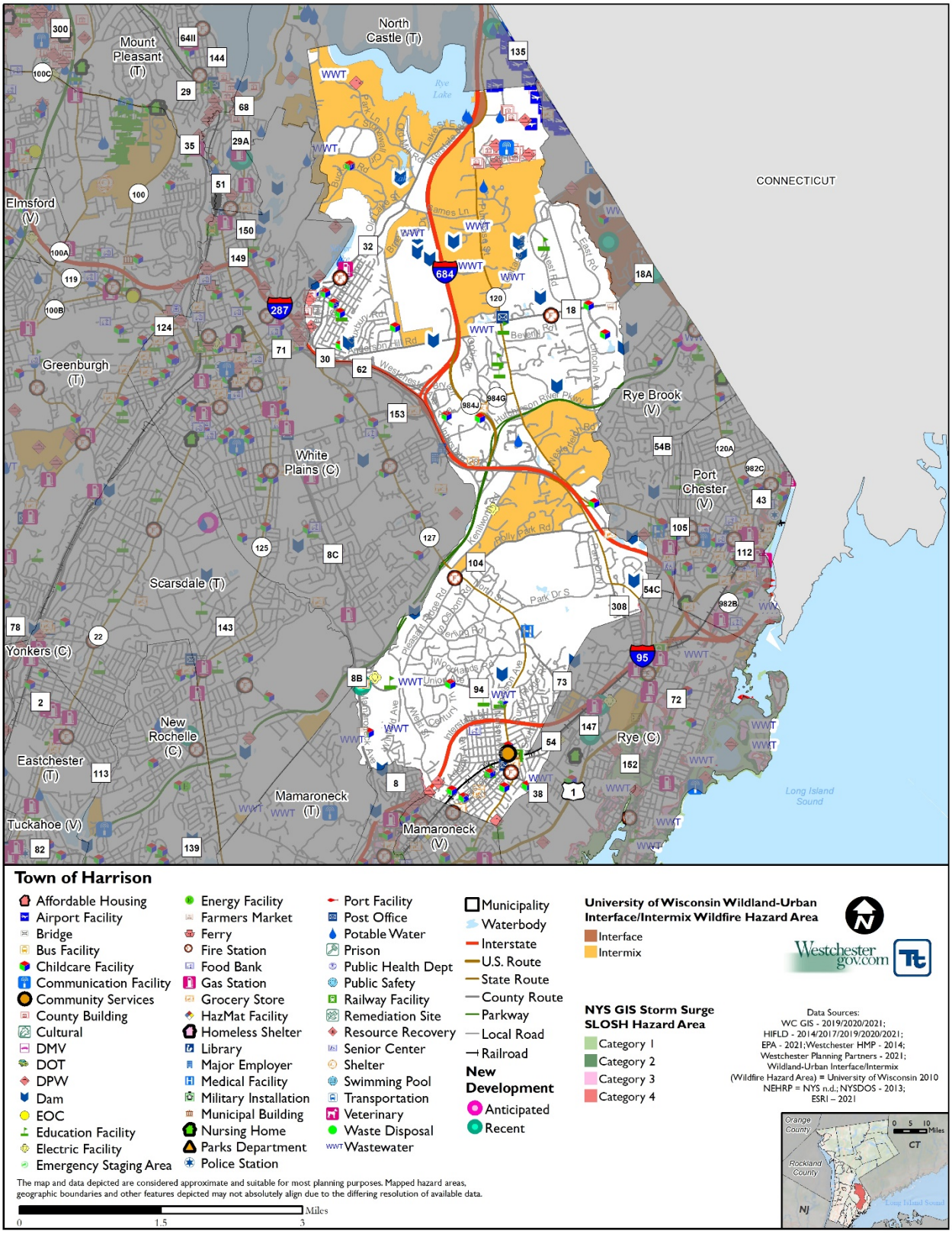


Figure 9.31-3. Town/Village of Harrison Hazard Area Extent and Location Map 3

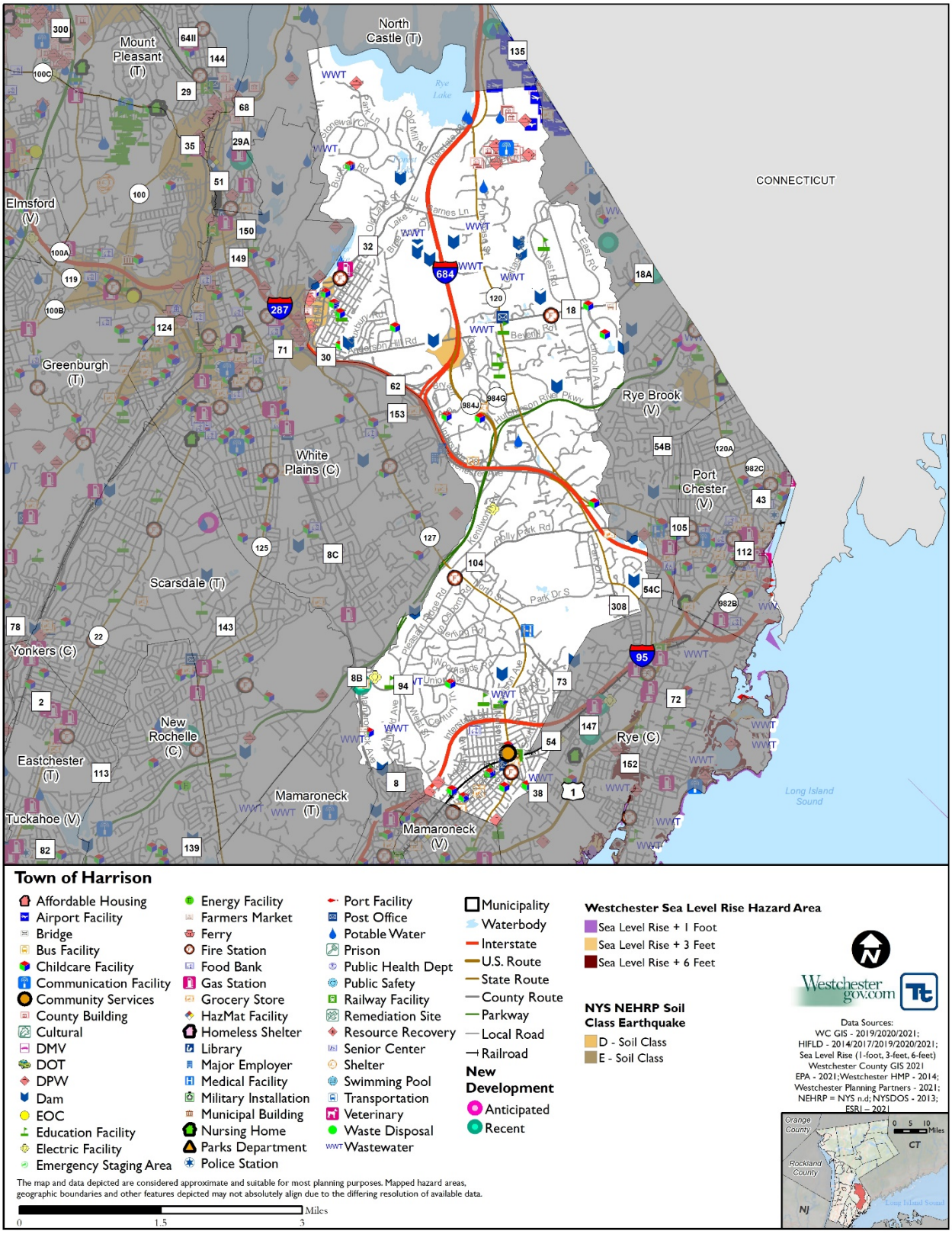
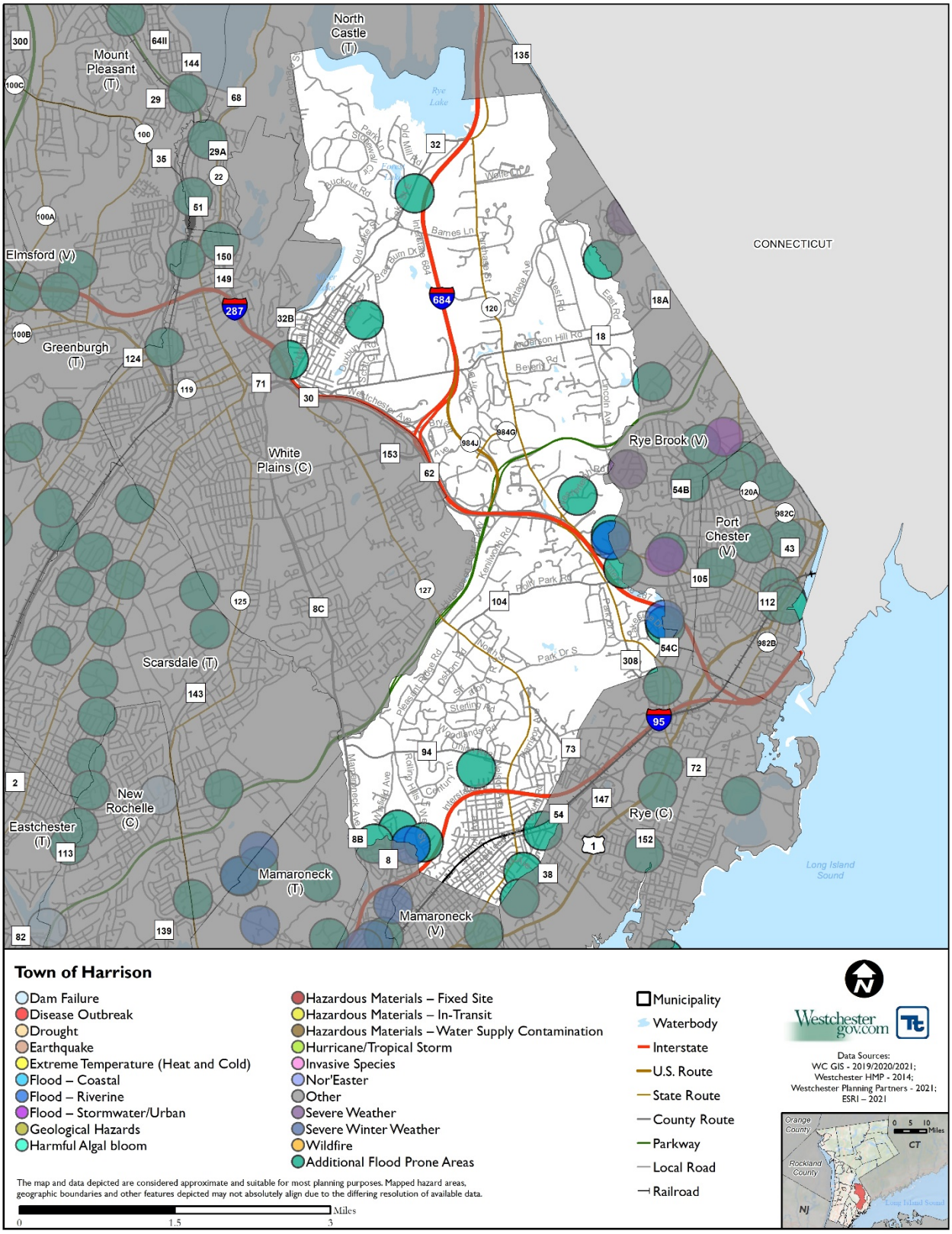


Figure 9.31-4. Town/Village of Harrison Hazard Area Extent and Location Map 4



Hazard Event History

Westchester County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the county and its municipalities.

The Town/Village of Harrison's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Westchester County. Table 9.31-15 provides details regarding municipal-specific loss and damages the Town/Village experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.31-15. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 13, 2017	High Wind	No	Low pressure passed to the east of Westchester County and rapidly deepened, resulting in strong winds with gusts exceeding 70 mph.	Downed trees, wires and flooding made some roads impassable. Debris removal was performed following the event.
March 2, 2018	High Wind	No	A deep area of low pressure passed off the coast resulting in strong winds with gusts exceeding 70 mph.	Downed trees, wires and flooding made some roads impassable. Debris removal was performed following the event.
April 13, 2020	High Wind	No	Deep low pressure passed to the west of the area resulting in high winds with gusts near 70 mph.	Downed trees, wires and flooding made some roads impassable. Debris removal was performed following the event.
August 4, 2020	Tropical Storm (DR-4567)	Yes	Tropical Storm Isaias passed over the region, resulting in high winds with gusts between 60-80 mph.	Downed trees, wires and flooding made some roads impassable. Debris removal was performed following the event.
January 20, 2020 – Present	Covid-19 Pandemic (EM-3434) (DR-4480)	Yes	Between March 1, 2020 and June 6, 2021, Westchester County reported 129,488 confirmed cases of COVID-19, and 2,284 total fatalities.	Municipal Building was retrofitted with safety shields/barricades. Anyone entering any Town Building was required to submit to a temperature scan. All high touch surfaces and Town vehicles were sanitized daily. Hand sanitizer masks and gloves were provided to all employees.
August 21, 2021	Hurricane Henri	No	Hurricane Henri resulted in heavy rainfall in Westchester County	Town had major flooding making some roads impassable.
September 1, 2021	Hurricane Ida remnants	TBD	Remnants of Hurricane Ida resulted in intense rainfall, resulting in widespread flash flooding.	Town had major flooding making some roads impassable.

Notes:
EM *Emergency Declaration (FEMA)*
FEMA *Federal Emergency Management Agency*
DR *Major Disaster Declaration (FEMA)*
N/A *Not applicable*

Hazard Ranking and Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town/Village of Harrison's risk assessment results and data used to determine the hazard ranking.

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Westchester County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town/Village of Harrison. The Town/Village of Harrison has reviewed the county hazard risk/vulnerability risk ranking table as well as its individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Town/Village indicated the following:

- The Town/Village agreed with the calculated hazard rankings.

Table 9.31-16. Hazard Ranking Input

Disease Outbreak	Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	CBRN
Low	Low	Low	High	High	Medium	Low	Low

Note: The scale is based on the hazard rankings established in Section 5.3 and modified as appropriate during review by the jurisdiction

Critical Facilities

New York State Department of Environmental Conservation (DEC) Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a Special Flood Hazard Area (SFHA) unless constructed according to specific mitigation specifications, including being raised 2' above the Base Flood Elevation (BFE). This statute is outlined at http://tinyurl.com/6-CRR-NY-502-4. While all vulnerabilities should be assessed and documented, the State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2-percent annual chance flood event, or worst damage scenario. For those that do not meet these criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.31-17. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
WESTCHESTER JOINT WATER WORKS	Potable Water Treatment Facility	Y	Y	0.0	0.0	2021-Harrison-005
Spring Lake Dam	Dam	Y	Y	0.0	0.0	2021-Harrison-005
Forest Lake Dam	Dam	Y	Y	0.0	0.0	2021-Harrison-005
Mamaroneck Reservoir Dam	Dam	Y	Y	0.0	0.0	2021-Harrison-005, 2021-Harrison-011
Bowman Ave Dam	Dam	Y	Y	0.0	0.0	2021-Harrison-005
Nelson Brook Flood Control Dam	Dam	Y	Y	0.0	0.0	2021-Harrison-005
HARRISON COMMUNITY SERVICES FP	Food Bank	Y	Y	18.5	70.6	2021-Harrison-005
County Road Maintenance Garage	County Building	Y	Y	0.0	0.2	2021-Harrison-005
HAR Resid DD	DPW	Y	Y	4.6	27.6	2021-Harrison-008
UnNamed	DPW	Y	Y	15.2	100.0	2021-Harrison-008
Gleason Place Utility Garage	DPW	Y	Y	6.0	39.5	2021-Harrison-008
Brae Burn Drive Pump Station	Wastewater Pump Station	Y	Y	0.0	0.0	2021-Harrison-008

Source: Westchester HMP 2021; FEMA 2007

Identified Issues

After review of the Town/Village of Harrison's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Town/Village of Harrison has identified the following vulnerabilities within their community:

- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town/Village has 94 repetitive loss properties, but other properties may be impacted by flooding as well. Areas prone to flooding in the Town/Village are the low lying areas and areas along the waterways. Specifically identified are properties in the following areas: Temple Street, Bradford Street, Congress Street, Ellsworth Avenue, Indian Trail, Shawnee Trail, Pinehurst Drive, Walnut Lane, Crotona Avenue, Glendale Road, Oak Street, Osborne Road, Woodlands Road, Park Avenue, West Street, Batavia Place, Ramapo Trail, Post Place, Condit Street, Crystal Street, and Genesee Trail.
- Critical facilities require backup power to maintain continuity of services. Two libraries, two community centers, and the Veterans Building lack backup power. The Sollazzo Center is an emergency shelter. The other community center, the libraries, and the Veterans Building can be used for warming and cooling shelters.
- The current Emergency Response Plan identifies responsibilities for response during hazard events. The Plan could be expanded to include more information on evacuation routes/procedures and sheltering.

- Flooding is a regional problem which requires regional solutions for Beaver Swamp.
- The Town/Village has numerous critical facilities with flood exposure which are privately owned.
- The Town/Village has not identified appropriate locations for the placement of temporary and permanent housing outside of the Special Flood Hazard Area.
- Residents are not receiving Town/Village notifications.
- The Town/Village has numerous Town/Village owned critical facilities located within the SFHA or the 500-year floodplain. Flood exposed facilities under the Town/Village's jurisdiction that are considered critical include:
    - Gleason Place Utility Garage and other DPW facilities
    - Brae Burn Drive Pump Station
- Current FIRMs do not include some areas that are experience flooding.
- Flooding take place on Brentwood Brook in the vicinity of the Louis M Kline Middle School and the Harrison Avenue Elementary School.
- The Mamaroneck Reservoir Dam is located in the Town/Village of Harrison but under the jurisdiction of the Town of Mamaroneck. The Town/Village would like to see removal of the dam as the reservoir is no longer being used.
- Additional floodplain administration training is needed for staff, specifically for building inspectors.
- Drainage upgrades are needed in areas that experience nuisance flooding and poor drainage in Downtown Harrison, Purchase, and West Harrison.
- Near the Harrison Elementary School, a pond floods and impacts nearby homes. Poor drainage and filling of the pond is suspected to be the cause of flooding. The pond is under the jurisdiction of the school district.
- The Town/Village piping, sewage, and plumbing drainage systems are outdated and inefficient.

Specific areas of concern based on resident response to the Westchester County Hazard Mitigation Citizen survey include:

- Ramapo Trail down to Union Ave is prone to flooding. There is a "Duck Pond" on the property of the school on Harrison Avenue at the corner of Nelson and Union Avenues that has been completely disregarded by the School. It floods over every terrible storm event and floods the school parking lot, fields, and causes dozens if not hundreds of houses in our beautiful neighborhood to flood. The pipes are 10 inch pipes and have not been replaced in 50 years.
- The Town/Village is impacted by poor drainage and the piping, sewage, and plumbing drainage systems are outdated and inefficient. Harrison Trails area sewer system not adequate and the system backs up into houses with heavy rains.

9.31.8 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

Table 9.31-18. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TVH-1 (old)	Acquire backup generators for all critical facilities	All Hazards	Mayor		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. Sollazzo Center Emergency Shelter, community centers, libraries, Veterans Building need backup power. 3.
TVH-2	Evaluate potential mitigation measures for reducing icing along steep streets in West Harrison	Ice	Engr.		Ongoing Capability	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. Ongoing Capability. Apply brine to roadways before storms.
TVH-3	Evaluate potential flood mitigation needs along Brentwood Brook near two local schools; this may include flood storage at the middle school.	Flooding	Engr.		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1.Include in HMP Update 2. Louis M Kline Middle School. Harrison Avenue Elementary School. Flood control project 3.
TVH-4	Replace culverts along Pleasant Ridge Road.	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1.Discontinue 2. 3. No longer a priority
TVH-5	Implement flood mitigation measures along Glendale Road	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority
TVH-6	Implement flood mitigation measures in the vicinity of West Street along LeCount Creek	Flooding	Engr. / DPW		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority
TVH-7	Implement flood mitigation measures along Oakland Avenue	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority
TVH-8	Implement flood mitigation measures along Westerleigh Road	Flooding	Engr. / DPW		Complete	Cost: $171,475.00 Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. Complete

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TVH-9	Implement flood mitigation measures along the Mamaroneck River between Barnes Land and Anderson Hill Road	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority within the next 5 years.
TVH-10	Implement flood mitigation measures in the vicinity of Lake Street East, Old Lake Street, and Barnes Lane, including replacement of culverts along Barnes Lane.	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority within the next 5 years.
TVH-11	Implement flood mitigation measures from Osborne Road to Harrison Avenue and Haviland Street to Sterling Avenue	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority within the next 5 years.
TVH-12	Complete feasibility study for using solar energy to power municipal buildings and implement recommendations	All Hazards	Mayor		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. Remaining actions not related to hazard mitigation.
TVH-13	Upgrade and acquire new portable generators for emergency services	All Hazards	Mayor		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. Looking for fixed site generators at two libraries, two recreation centers, and Veterans Building which could be potentially used as warming and cooling centers. 3.
TVH-14	Evaluate methods to mitigate nuisance flooding in low-lying and/or poorly draining areas in Downtown Harrison, Purchase, and West Harrison	Flooding	Engr. / DPW		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. Drainage upgrades needed. Complete engineering study to identify potential solutions. 3.

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
TVH-15	Update Comprehensive Plan and Emergency Response Plan to incorporate elements of hazard mitigation plan	All Hazards	Mayor / Planning Board		In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. Comprehensive Plan was recently done. Emergency Response Plan requires update. Include info on sheltering, evacuation, and housing. 3.
TVH-16	At Woodlands Road, construct a 4' x 6' concrete box culvert, approximately 800 feet in length, to help convey floodwaters	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. Combine with Brentwood Brook project 3.
TVH-17	Culvert beneath Dinsmore Place will be resized and realigned to more efficiently convey Nelson Creek.	Flooding	Engr. / DPW		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3. No longer a priority
TVH-18	Assess and prioritize non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss, 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. Implement as funding becomes available. Specifically identified	All	Village Engineering via NFIP FPA) with NYS DHSES, FEMA support		No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. 3.

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing Capability, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	are properties in the following areas: Temple Street, Bradford Street, Congress Street, Flagler Drive, Ellsworth Avenue, Indian Trail, Shawnee Trail, Pinehurst Drive, Walnut Lane, Crotona Avenue, Glendale Road, Oak Street, Osborne Road, Hickory Grove Drive, Belmont Avenue, Woodlands Road, Park Avenue, West Street, Batavia Place, Ramapo Trail, Post Place, Condit Street, Crystal Street, and Genesee Trail.						

Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town/Village of Harrison has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2015 HMP:

- None identified

Proposed Hazard Mitigation Initiatives for the HMP Update

The Town/Village of Harrison participated in a mitigation action workshop in October 2021 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories.

Table 9.31-19. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak	X	X		X			X			X
Earthquake	X	X		X			X			X
Extreme Temperature	X	X		X			X			X
Flood	X	X		X	X	X	X		X	X
Severe Storm	X	X		X		X	X		X	X
Severe Winter Storm	X	X		X			X			X
Wildfire	X	X		X			X			X
CBRN	X	X		X		X	X			X

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

Table 9.31-20 summarizes the comprehensive-range of specific mitigation initiatives the Town/Village of Harrison would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.31-21 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.31-20. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-Harrison-001	Repetitive Loss Mitigation	1, 2	Flood, Severe Storm	**Problem**: Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town/Village has 94 repetitive loss properties, but other properties may be impacted by flooding as well. Areas prone to flooding in the Town/Village are the low lying areas and areas along the waterways. Specifically identified are properties in the following areas: Temple Street, Bradford Street, Congress Street, Ellsworth Avenue, Indian Trail, Shawnee Trail, Pinehurst Drive, Walnut Lane, Crotona Avenue, Glendale Road, Oak Street, Osborne Road, Woodlands Road, Park Avenue, West Street, Batavia Place, Ramapo Trail, Post Place, Condit Street, Crystal Street, and Genesee Trail. **Solution**: Conduct outreach to 100 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to	No	None	5 years	NFIP Floodplain Administrator, supported by homeowners	High	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, local cost share by residents	High	SIP	PP

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).										
2021-Harrison-002	Emergency Shelter Backup Power	1, 2	All Hazards	**Problem**: Critical facilities require backup power to maintain continuity of services. Two libraries, two community centers, and the Veterans Building lack backup power. The Sollazzo Center is an emergency shelter. The other community center, the libraries, and the Veterans Building can be used for warming and cooling shelters. **Solution**: The Engineer will research what size generator is needed to power each facility. The Town/Village will then purchase and install the selected generators and necessary electrical components to supply backup power to the facilities. Public Works will be responsible for maintenance and testing of the generators following installation.	Yes	None	Within 5 years	Engineer, Public Works	High	Protect public health and safety and ensure continued operation of critical facility and essential functions during power outages.	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	High	SIP	ES
2021-Harrison-003	Evacuation and Sheltering Planning	1	All Hazards	**Problem**: The current Emergency Response Plan identifies responsibilities for response during hazard events. The Plan could be expanded to include more information on evacuation routes/procedures and sheltering. **Solution**: The Town/Village will update the Emergency Response Plan to include guidance on	Yes	None	Within 5 years	OEM	Staff time	Evacuation and sheltering procedures established	Municipal Budget	High	LPR	ES

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				evacuation procedures and sheltering.										
2021-Harrison-004	Regional Flood Control for Beaver Swamp	1, 2, 4	Flood	**Problem**: Flooding is a regional problem which requires regional solutions for Beaver Swamp. **Solution**: The Town/Village will coordinate with neighbors in the Town of Mamaroneck and the City of Rye as well as Westchester County, to study flooding in the area of Beaver Swamp and identify sources and potential solutions. Cost-effective mitigation actions will be implemented.	No	None	Within 5 years	Engineer, FPA, Town of Mamaroneck, City of Rye, Westchester County	TBD by flood study	Reduction in flood risk in Beaver Swamp region	BRIC, HMGP, municipal and county budgets	High	LPR, SIP	PP, SP
2021-Harrison-005	Critical Facility Flood Outreach	3	Flood	**Problem:** The Town/Village has numerous critical facilities with flood exposure which are privately owned. **Solution:** The FPA will conduct outreach to facility managers to discuss flood exposure and potential options for mitigation.	Yes	None	Within 6 months	FPA	Staff time	Facility managers aware of flood exposure and potential mitigation options	Municipal budget	High	EAP	PI
2021-Harrison-006	Temporary and Permanent Housing	1, 2	All Hazards	**Problem**: The Town/Village has not identified appropriate locations for the placement of temporary and permanent housing outside of the Special Flood Hazard Area. **Solution**: The Town/Village will work with Westchester County to identify appropriate locations for the siting of temporary and permanent housing within the region.	No	None	6 months	Administration working with Westchester County	Staff time	Temporary and permanent housing locations identified	Municipal budget	High	LPR	ES

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-Harrison-007	Emergency Notifications	1	All Hazards	**Problem: R**esidents are not receiving Town/Village outreach and emergency notifications. **Solution:** The Town/Village will explore options for increasing the effectiveness of emergency notification. Notification could be made to the residents via a community alert such as Nixle. This would be a plausible option, prior to an event. If possible and necessary residents could be notified in person by law enforcement going "door to door" during an actual event. The Mutual Aid System could also be invoked, to assist with notification. Effective measures identified will be implemented.	No	None	2 years	OEM	Medium	Increased effectiveness of emergency notifications	Town/Village budget	High	EAP	PI, ES
2021-Harrison-008	Critical Facility Flood Protection	1, 2	Flood	**Problem:** The Town/Village has numerous Town/Village owned critical facilities located within the SFHA or the 500-year floodplain. Flood exposed facilities under the Town/Village's jurisdiction that are considered critical include: • Gleason Place Utility Garage and other DPW facilities • Brae Burn Drive Pump Station **Solution:** The Engineer will survey each flood exposed critical facility to determine level of flood protection. For facilities not protected to the 500-year flood	Yes	None	Within 5 years	Engineer	Low for survey	Protect critical facilities to the 500-year flood level	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Municipal Budget	High	SIP	PP

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				level, the Town/Village will complete a feasibility assessment to determine cost-effective measures that can be completed to provide 500-year flood protection. Cost-effective measures will be completed.										
2021-Harrison-009	Town/Village Flood Map	3	Flood	**Problem:** Current FIRMs do not include some areas that are experience flooding. **Solution:** The Town/Village plans to expand flood mapping and establish a Town/Village specific flood map that identifies all flooding sources (riverine, precipitation, urban, over land flooding). Once complete, the Town/Village will use this flood map to make updates to the Town/Village code.	No	None	Within 5 years	Engineer, FPA, Administration	Medium	Better flood map data for floodplain administration	BRIC, Town/Village budget	High	LPR	PR
2021-Harrison-010	Brentwood Brook Flood Control	1, 2	Flood, Severe Storm	**Problem:** Flooding take place on Brentwood Brook in the vicinity of the Louis M Kline Middle School and the Harrison Avenue Elementary School. **Solution:** The Town/Village will evaluate potential flood mitigation needs along Brentwood Brook near the two schools. Cost effective mitigation measures will be implemented. Expected cost effective measures include: • Creation of flood storage at the Louis M Kline Middle School	No	May require permitting	Within 5 years	Engineer, Louis M Kline Middle School, Harrison Avenue Elementary School.	High	Reduction in flooding along Brentwood Brook	BRIC, HMGP, FMA, CHIPS, Town/Village budget	High	SIP	SP

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				through construction of an earthen dam. • At Woodlands Road, construct a 4' x 6' concrete box culvert, approximately 800 feet in length, to help convey floodwaters										
2021-Harrison-011	Mamaroneck Reservoir Dam Removal	1, 2	Flood	**Problem:** The Mamaroneck Reservoir Dam is located in the Town/Village of Harrison but under the jurisdiction of the Town of Mamaroneck. The Town/Village would like to see removal of the dam as the reservoir is no longer being used. **Solution:** The Town/Village will conduct outreach to the Town of Mamaroneck and encourage the Town to remove the Mamaroneck Reservoir Dam.	Yes	May require permitting	1 year	FPA, OEM, Administration	Staff time	Removal of dam would eliminate threat of dam failure	Town/Village budget	High	EAP	PI
2021-Harrison-012	Floodplain Administration Training	3	Flood	**Problem:** Additional floodplain administration training is needed for staff, specifically for building inspectors. **Solution:** Staff will undergo floodplain management training to increase floodplain management capabilities and enforcement in the Town/Village.	No	None	Within 5 years	Administration, FPA, Building Inspectors	Staff time	Increased staff capabilities for floodplain administration	Town/Village budget	High	LPR	PR
2021-Harrison-013	Downtown Harrison, Purchase, and West	1, 2	Flood	**Problem:** Drainage upgrades are needed in areas that experience nuisance flooding and poor drainage in Downtown Harrison, Purchase, and West Harrison.	No	None	Within 5 years	Engineer	TBD by engineering study	Increased drainage and reduction in flooding	BRIC, HMGP, CHIPS, Town/Village budget	High	SIP	SP

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
	Harrison Drainage			**Solution:** The Town/Village will complete an engineering study to identify potential solutions. Cost-effective measures will be implemented.										
2021-Harrison-014	Harrison Elementary School Pond	2, 3	Flood	**Problem:** Near the Harrison Elementary School, a pond floods and impacts nearby homes. Poor drainage and filling of the pond is suspected to be the cause of flooding. The pond is under the jurisdiction of the school district. **Solution:** The Town/Village will bring the flooding to the attention of the school and request the school district to clean the pond and make drainage improvements.	No	None	Within 6 months	FPA	Staff time	School district aware of flooding and encouraged to act	Town/Village budget	High	EAP	PI
2021-Harrison-015	Sanitary Sewer Pipe Rehabilitation	2	Flood, CBRN	**Problem:** The Town/Village piping, sewage, and plumbing drainage systems are outdated and inefficient. **Solution:** The Town is in the middle of performing a Town-wide sanitary sewer project to repair, replace, line pipes that are in need of rehabilitation.	No	None	Within 5 years	Engineer	High	Reduction in risk of sanitary sewer damage/spills	Town/Village budget	High	SIP	PP

Notes:
Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
EHP	*Environmental Planning and Historic Preservation*

Potential FEMA HMA Funding Sources:

FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
BRIC	*Building Resilient Infrastructure and Communities Program*

Timeline:
The time required for completion of the project upon implementation

Cost:
The estimated cost for implementation.

FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
OEM	*Office of Emergency Management*

Critical Facility:

Yes *Critical Facility located in 1% floodplain*

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions 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 acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - 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 educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - 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.*
- *Structural Flood Control Projects (SP) - 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.*
- *Emergency Services (ES) - 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*

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Table 9.31-21. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2021-Harrison-001	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Harrison-002	Emergency Shelter Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Harrison-003	Evacuation and Sheltering Planning	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Harrison-004	Regional Flood Control for Beaver Swamp	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2021-Harrison-005	Critical Facility Flood Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Harrison-006	Temporary and Permanent Housing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Harrison-007	Emergency Notifications	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Harrison-008	Critical Facility Flood Protection	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2021-Harrison-009	Town/Village Flood Map	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2021-Harrison-010	Brentwood Brook Flood Control	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2021-Harrison-011	Mamaroneck Reservoir Dam Removal	1	1	1	1	0	1	1	1	1	1	0	1	1	1	12	High
2021-Harrison-012	Floodplain Administration Training	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-Harrison-013	Downtown Harrison, Purchase, and West Harrison Drainage	1	1	1	0	1	1	0	1	1	1	0	0	1	1	10	High
2021-Harrison-014	Harrison Elementary School Pond	0	1	1	1	0	1	1	1	1	1	0	1	1	1	11	High
2021-Harrison-015	Sanitary Sewer Pipe Rehabilitation	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).

9.31.9 Action Worksheets

The following action worksheets have been developed by the Town/Village of Harrison to aid in the submittal of grant applications to support the funding of high priority proposed actions.

Action Worksheet			
Project Name:	Repetitive Loss Mitigation		
Project Number:	2021-Harrison-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Flood		
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town/Village has 94 repetitive loss properties, but other properties may be impacted by flooding as well. Areas prone to flooding in the Town/Village are the low lying areas and areas along the waterways. Specifically identified are properties in the following areas: Temple Street, Bradford Street, Congress Street, Ellsworth Avenue, Indian Trail, Shawnee Trail, Pinehurst Drive, Walnut Lane, Crotona Avenue, Glendale Road, Oak Street, Osborne Road, Woodlands Road, Park Avenue, West Street, Batavia Place, Ramapo Trail, Post Place, Condit Street, Crystal Street, and Genesee Trail.		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct outreach to 100 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes ☐	No ☒	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	1% annual chance flood event + freeboard *(in accordance with flood ordinance)*	**Estimated Benefits (losses avoided):**	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	**Goals Met:**	1, 2
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	5 years
Estimated Time Required for Project Implementation:	5 years	**Potential Funding Sources:**	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Elevate homes	$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			

Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Repetitive Loss Mitigation	
Project Number:	2021-Harrison-001	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Town/Village has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the Town/Village.
Administrative	0	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	5 years
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Emergency Shelter Backup Power		
Project Number:	2021-Harrison-002		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Critical facilities require backup power to maintain continuity of services. Two libraries, two community centers, and the Veterans Building lack backup power. The Sollazzo Center is an emergency shelter. The other community center, the libraries, and the Veterans Building can be used for warming and cooling shelters.		
Action or Project Intended for Implementation			
Description of the Solution:	The Engineer will research what size generator is needed to power each facility. The Town/Village will then purchase and install the selected generators and necessary electrical components to supply backup power to the facilities. Public Works will be responsible for maintenance and testing of the generators following installation.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes ☐	No ☒	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Protect public health and safety and ensure continued operation of critical facility and essential functions during power outages.
Useful Life:	20 years	**Goals Met:**	1, 2, 6
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, Public Works	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Install solar panels	$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Emergency Shelter Backup Power	
Project Number:	2021-Harrison-002	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect critical services of sheltering facilities
Property Protection	1	Project will protect buildings from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Town/Village has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	