

9.46 Village of Tuckahoe

This section presents the jurisdictional annex for the Village of Tuckahoe. 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 Village participated in the planning process; an assessment of the Village of Tuckahoe’s risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

9.46.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Tuckahoe’s hazard mitigation plan primary and alternate points of contact. The Village of Tuckahoe 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 Village departments, including: Building Department, Department of Public Works, Police Department and the Mayor and Board of Trustees. The Village Administrator 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 9.46-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: David Burke, Village Administrator Address: 65 Main Street, Tuckahoe, NY 10707 Phone Number: (914)-813-9482 Email: dburke@tuckahoe-ny.com	Name/Title: Chief John Costanzo, Police Chief Address: 65 Main Street, Tuckahoe, NY 10707 Phone Number: (914)-961-0202 Email: jcostanzo@tuckahoe-ny.com
NFIP Floodplain Administrator	
Name/Title: Franco DiMarco, Superintendent of Public Works Address: 65 Main Street, Tuckahoe, NY 10707 Phone Number: (914)-906-4437 Email: fdimarco@tuckahoe-ny.com	
Additional Contributors	
Name/Title: David Burke, Village Administrator Method of Participation: Provided information on past events, Village capabilities, permitting, and the status on previous mitigation actions.	
Name/Title: Franco DiMarco, Storm and Floodplain Administrator Method of Participation: Provided information on NFIP administration	
Name/Title: William Williams, Building Inspector Method of Participation: Review of flood prone properties	

9.46.2 Municipal Profile

The Village of Tuckahoe is in lower central Westchester County within the Town of Eastchester, a suburb of New York City, roughly 15 miles north of midtown Manhattan. The Village is One-and-a-half miles long and

three-fourths of a mile wide, covering a total land area of 0.6 square miles. It is bounded by the Village of Bronxville to the south, and the unincorporated of the Town of Eastchester to the north and east. The Bronx River serving as its western boundary, separating the Village of Tuckahoe from the Crestwood section of the City of Yonkers.

According to the U.S. Census, the 2010 population for the Village of Tuckahoe was 6,486. The estimated 2019 population was 6,584, a 1.5 percent increase from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 6.5 percent of the population is 5 years of age or younger and 16.4 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.

9.46.3 Jurisdictional Capability Assessment and Integration

The Village of Tuckahoe 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 9.46.3). The Village of Tuckahoe’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 Village of Tuckahoe. The comment field provides information as to where hazard mitigation has been integrated.

Table 9.46-2. 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	Adopted NYS Building Code, Chapter 6 of Local Code, Buildings and Building Regulations	State and Local	Building Department
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> • In accordance with the New York State Executive Law, the provisions of the New York State Uniform Fire Prevention and Building Code shall be applicable in and enforced by the Village of Tuckahoe. 					
Zoning/Land Use Code	Yes	No	Appendix A of Local Code, Zoning	Local	Building Department
<i>How does this reduce risk?</i>					

	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
<ul style="list-style-type: none"> Zoning Appendix was adopted in the interest of the protection and promotion of the public health, safety and welfare. The Appendix has developmental policies that relate to hazard mitigation by taking into account: <ul style="list-style-type: none"> The physical characteristics of the terrain of the Village and the suitability of the land of the Village for various uses; The physical situation of the Village and the functional relationships of the uses of the land therein to the existing and prospective development of the intercommunity area consisting of the Village of Tuckahoe and adjoining areas in Westchester County, New York. 					
Subdivision Ordinance	Yes	No	Appendix A Zoning, Article VII Site Plan and Subdivision Approval	Local	Planning Board
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Before the approval by the Planning Board of any plat showing a subdivision and the creation of new blocks, lots or sites, with or without streets or highways, all applicants for such approvals shall show, in proper cases and when required by the Planning Board, a park or parks suitably located for playground or other recreation purposes. 					
Site Plan Ordinance	Yes	No	Appendix A Zoning, Article VII Site Plan and Subdivision Approval	Local and County	Planning Board
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> No building permit shall be issued for a structure, no structure or use shall be established and no site shall be changed, other than a one-family or two-family dwelling and its permitted accessory structures and uses, unless it is in conformity with a site plan approved by the Planning Board in accordance with this section. 					
Stormwater Management Ordinance	Yes	Yes	Appendix A Zoning Article XII Stormwater Control; Chapter 18A Storm Sewers; Chapter 7B Erosion and Sediment Control	Local	Department of Public Works
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Appendix A Zoning Article XII Stormwater Control: No application for approval of a land development activity shall be reviewed until the appropriate board has received a stormwater pollution prevention plan (SWPPP) prepared in accordance with the specifications in this article. Chapter 18A Storm Sewers: The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Village of Tuckahoe through the regulation of nonstormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This article 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 article are: <ul style="list-style-type: none"> (1) To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user. (2) To prohibit illicit connections and discharges to the municipal separate storm sewer system. (3) To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this article. Chapter 7B Erosion and Sediment Control: The purpose of this chapter and Appendix A, Zoning, Article XII, Stormwater Control 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 § 7B-1 hereof. This chapter and Appendix A, Zoning, Article XII, Stormwater Control, seeks to meet those purposes by achieving the following objectives: <ul style="list-style-type: none"> (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; (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; (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; (d) Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; (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 (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. 					
Post-Disaster Recovery/ Reconstruction Ordinance	No	No	-	-	-
<i>How does this reduce risk?</i>					
Real Estate Disclosure	Yes	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent

	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
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> 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	No	No	-	-	-
<i>How does this reduce risk?</i>					
Environmental Protection Ordinance	Yes	Yes	Chapter 7 ½ Environmental Conservation (Local Law No. 2-1979)	Local	Building Inspector
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Local Law No. 2-1979 was enacted by the Village for the purpose of adopting additional procedures for implementation by the Village of environmental review of "actions" under Article 8 of the New York State Environmental Conservation Law, known as the State Environmental Quality Review Act or "SEQR." 					
Flood Damage Prevention Ordinance	Yes	Yes	Chapter 8A of Local Code	Federal, State, County and Local	Building Inspector
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> It is the purpose of this chapter 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: <ul style="list-style-type: none"> (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; (b) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (c) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters; (d) Control filling, grading, dredging and other development which may increase erosion or flood damages; (e) Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and (f) Qualify for and maintain participation in the National Flood Insurance Program. BFE+2 feet is required for all construction in the SFHA (residential and non-residential). 					
Wellhead Protection	No	No	-	-	-
<i>How does this reduce risk?</i>					
Emergency Management Ordinance	No	No	-	-	-
<i>How does this reduce risk?</i>					
Climate Change Ordinance	No	No	-	-	-
<i>How does this reduce risk?</i>					
Other	No	-	-	-	-
Planning Documents					
Comprehensive Plan	Yes	No	Comprehensive Plan, 2014	Local	Village Administrator
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> The Village will be given, within one-year, a comprehensive update to the Village Comprehensive Plan; Review will focus in on sustainable initiatives as well as potential hazard mitigation. 					
Capital Improvement Plan	Yes	No	Capital Improvements Plan	Local	Administration
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> The purpose of the Capital Plan is to recognize and subsequently fund projects related to mitigation; this could be upgrades to catch basins and other storm/ sewer infrastructure or larger long term projects. 					
Disaster Debris Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Floodplain Management or Watershed Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					

	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
Stormwater Management Plan	Yes	No	Annual MS4 Storm Water Report	Local	Department of Public Works
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Annual MS4 Storm Water Reports are filed each year and are aimed at addressing nonpoint source pollution. 					
Open Space Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Urban Water Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Habitat Conservation Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Economic Development Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Shoreline Management Plan	No	Yes, in jurisdictions with CEHA areas	-	-	-
<i>How does this reduce risk?</i>					
Community Wildfire Protection Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Community Forest Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Transportation Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Agriculture Plan	No	Yes	-	-	-
<i>How does this reduce risk?</i>					
Climate Action/ Resiliency/Sustainability Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Tourism Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Business/ Downtown Development Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Other	No	-	-	-	-
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	Yes	Emergency Response Plan	Local	Police Chief enforces through Department
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> The Emergency Response Plan covers short-term response (responsibilities and typical actions, to training, recovery with communications detailed. There is no information on evacuation detailed or housing needs. 					
Continuity of Operations Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Strategic Recovery Planning Report	No	No	-	-	-
<i>How does this reduce risk?</i>					

	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
Threat & Hazard Identification & Risk Assessment (THIRA) <i>How does this reduce risk?</i>	No	Yes	-	-	-
Post-Disaster Recovery Plan <i>How does this reduce risk?</i>	No	No	-	-	-
Public Health Plan <i>How does this reduce risk?</i>	No	No	-	-	-
Other	No	-	-	-	-

Development and Permitting Capability

The table below summarizes the capabilities of the Village of Tuckahoe to oversee and track development.

Table 9.46-3. 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	Building Department
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Building Department
Do you have a buildable land inventory? -If yes, describe. -If no, quantitatively describe the level of buildout in the jurisdiction.	No	The Village of Tuckahoe is a mostly built out community, and future development is mainly a repurposing of existing land use.

Administrative and Technical Capability

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

Table 9.46-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board approves site plans, subdivisions, redvisions and architectural review applications. Meeting scheduling is arranged through the Building Department.
Zoning Board of Adjustments	Yes	The Zoning Board of Appeals considers requests for variance from the Village Zoning Code.
Planning Department	Yes	Reviews planned development
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Tuckahoe Environmental and Sustainability Committee
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Department of Public Works responsibilities include are snow removal, sanitation and recycling,

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		masonry, electrical, maintaining our vast underground and overhead infrastructure, paving roads, street sweeping, storm preparedness, first responders, etc.
Construction/Building/Code Enforcement Department	Yes	The Building Department is responsible for the enforcement of the NYS Fire Prevention and Building Code, the Code of Ordinances of the Village of Tuckahoe, and the Village of Tuckahoe Zoning Code. The Building Department issues permits for Building and Alterations and conducts inspections.
Emergency Management/Public Safety Department	Yes	The Police Department acts in this capacity
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Swift911
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Catch basing cleaning and tree trimming yearly
Mutual aid agreements	Yes	With surrounding jurisdictions (V. Bronxville/ T. Eastchester)
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	Consultant (Dolph Rotfeld Engineering)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Consultant (Dolph Rotfeld Engineering), Building Inspector (Bill Williams)
Planners or engineers with an understanding of natural hazards	Yes	Consultant (BFJ Planning)
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Bill Williams (Building Inspector), Frank DiMarco (DPW)
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Frank DiMarco (DPW), County services, Consultants
Scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	John Costanzo (Police Chief)
Grant writer(s)	Yes	All Village staff trained to 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 Village of Tuckahoe.

Table 9.46-5. 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)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas or electric service	No

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?
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state funding programs	Yes, mitigation grant programs
Open Space Acquisition funding programs	Subdivision fee for parks/ open areas
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 Village of Tuckahoe.

Table 9.46-6. 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	Village Administrator/ Police Chief
Personnel skilled or trained in website development	Yes	Village Staff
Hazard mitigation information available on your website	Yes	The website includes information on stormwater management, water quality.
Social media for hazard mitigation education and outreach	Yes	Police Department has Facebook and Instagram.
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Planning Board to review impacts of hazard mitigation when reviewing specific proposals
Other programs already in place that could be used to communicate hazard-related information	No	-
Warning systems for hazard events	Yes	Swift911
Natural disaster/safety programs in place for schools	No	-
Other	No	-

Community Classifications

The table below summarizes classifications for community programs available to the Village of Tuckahoe.

Table 9.46-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
NYSDEC Climate Smart Community	No	-	-

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
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 9.46-8. Adaptive Capacity

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

9.46.4 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 Village of Tuckahoe.

Table 9.46-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Village of Tuckahoe	103	28	\$210,892.51	3

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 Village of Tuckahoe.

Table 9.46-10. Flood Vulnerability Summary and NFIP Compliance

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	<ul style="list-style-type: none"> Yonkers Ave by the Bronx River Watershed Marbledale Road South to Midland Place Garrett Street was inundated during storm Sandy & Irene Presently there is no list of properties
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	Presently, we do not have a list of property owners interested in flood mitigation. Mitigation by change in elevation has been engineered by Westchester County but never pursued. Funding for this project would be necessary.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	None
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Damage is determined by event and visual inspections. One was declared during recent flood events
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	No properties have been mitigated.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Department of Public Works
Are any certified floodplain managers on staff in your jurisdiction?	Yes
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? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes, additional training for staff members would be beneficial.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	GIS, education & outreach, inspections, plan review & implementation
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Based on past history or issues
What are the barriers to running an effective NFIP program in the community, if any?	No barriers, many times just funding
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No Violations
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	A Community Assistance Contact (CAC) occurred on June 24, 2020. A Community Assistance Visit occurred on March 19, 1998.
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	7B Sediment and erosion control Amended in 2008

NFIP Topic	Comments
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets.
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 planning board, zoning board and village engineer consider efforts to reduce flood risk when reviewing plans and projects.
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program? 	The Village does not participate in the CRS program and would possibly be interested.

9.46.5 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 Village of Tuckahoe has identified the following routes and procedures to evacuate residents prior to and during an event.

- The Village does not have official evacuation routes. However, being a small community, local officials are well aware of problem areas due to flooding or other potential emergencies and routes of evacuation will be main thoroughfares running both east/west and north/south. The Village will also coordinate with the County if use of the Bronx River Parkway was necessary.

Sheltering

The Village of Tuckahoe has identified the following designated emergency shelters within the Village.

Table 9.46-11. Designated Emergency Shelters

Site Name	Address	Capacity	Accommodates Pets?	ADA Compliant?	Backup Power?	Types of Medical Services Provided	Other Services Provided
The Village does not have designated emergency shelters. The Village will work with Westchester County to identify emergency sheltering within the region (action 2021-Village of Tuckahoe-007).							

Temporary Housing

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

Table 9.46-12. 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 Village has not identified appropriate locations for the placement of temporary outside of the Special Flood Hazard Area. The Village will work with Westchester County to identify appropriate locations for the siting of temporary housing within the region (action 2021-Village of Tuckahoe-007).					

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 Village of Tuckahoe has identified the following areas suitable for relocating homes outside of the floodplain.

Table 9.46-13. 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 Village has not identified appropriate locations for the placement of permanent housing outside of the Special Flood Hazard Area. The Village will work with Westchester County to identify appropriate locations for the siting of permanent housing within the region (action 2021-Village of Tuckahoe-007).					

9.46.6 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 9.46-14 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.46-14. 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	2	-	1	-	1	-	0	-	0	-	0	-	0	-
Multi-Family	0	-	0	-	0	-	0	-	0	-	1	-	0	-
Other (commercial, mixed-use, etc.)	2	-	2	-	0	-	2	-	0	-	2	-	2	-
Total Permits Issued	4	-	3	-	1	-	2	-	0	-	3	-	2	-
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														

150 Main St	Mixed use	21 units	150 Main St	None	Completed
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
82 Wallace	Residential	32 units	82 Wallace	None	Approved

SFHA Special Flood Hazard Area (1% flood event)

** Only location-specific hazard zones or vulnerabilities identified.*

Note: Information on permits issued within the SFHA were not available.

9.46.7 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 Village of Tuckahoe’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 Village of Tuckahoe has significant exposure. The maps also show the location of potential new development, where available. These maps are illustrated below.

Figure 9.46-1. Village of Tuckahoe Hazard Area Extent and Location Map 1

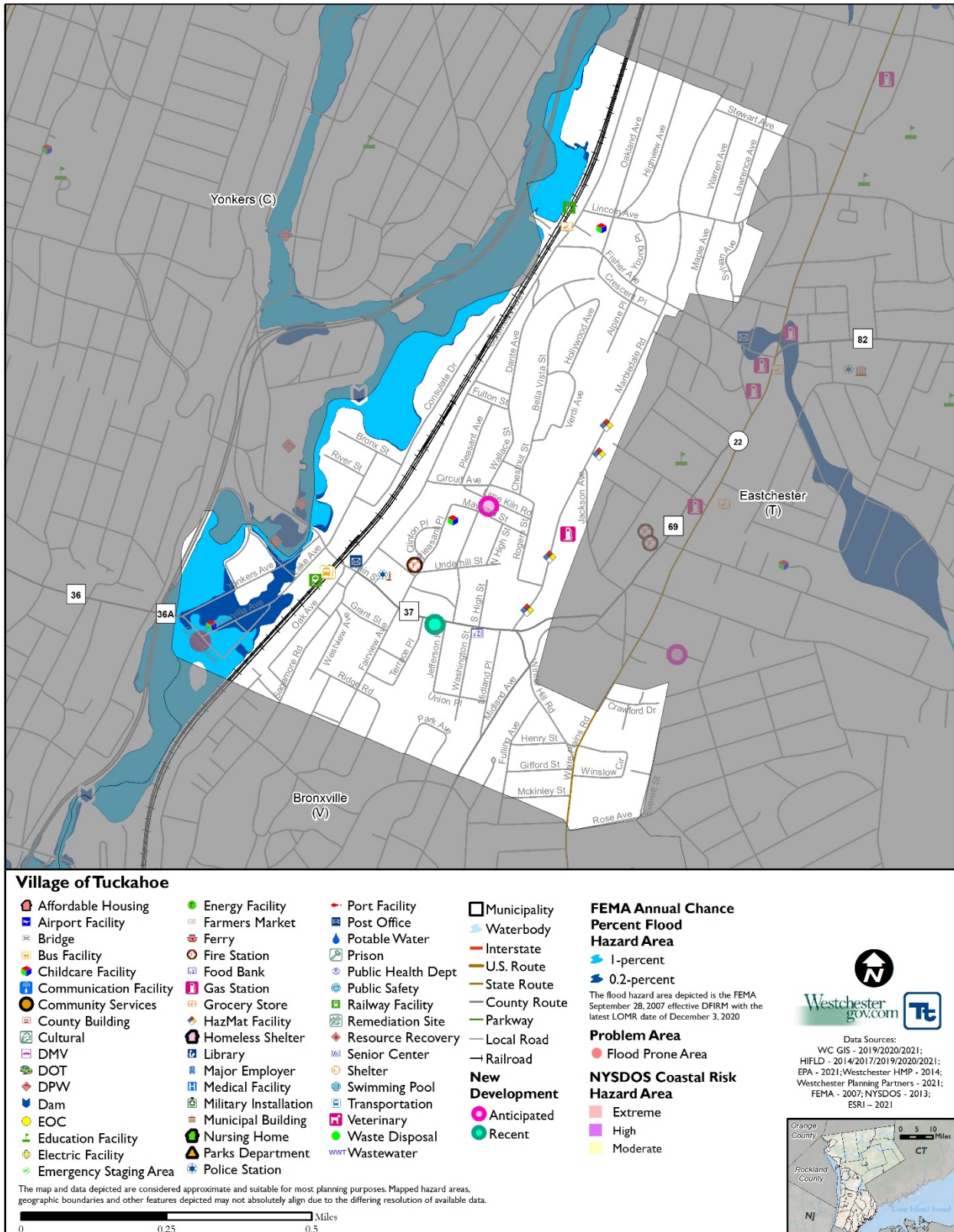


Figure 9.46-2. Village of Tuckahoe Hazard Area Extent and Location Map 2

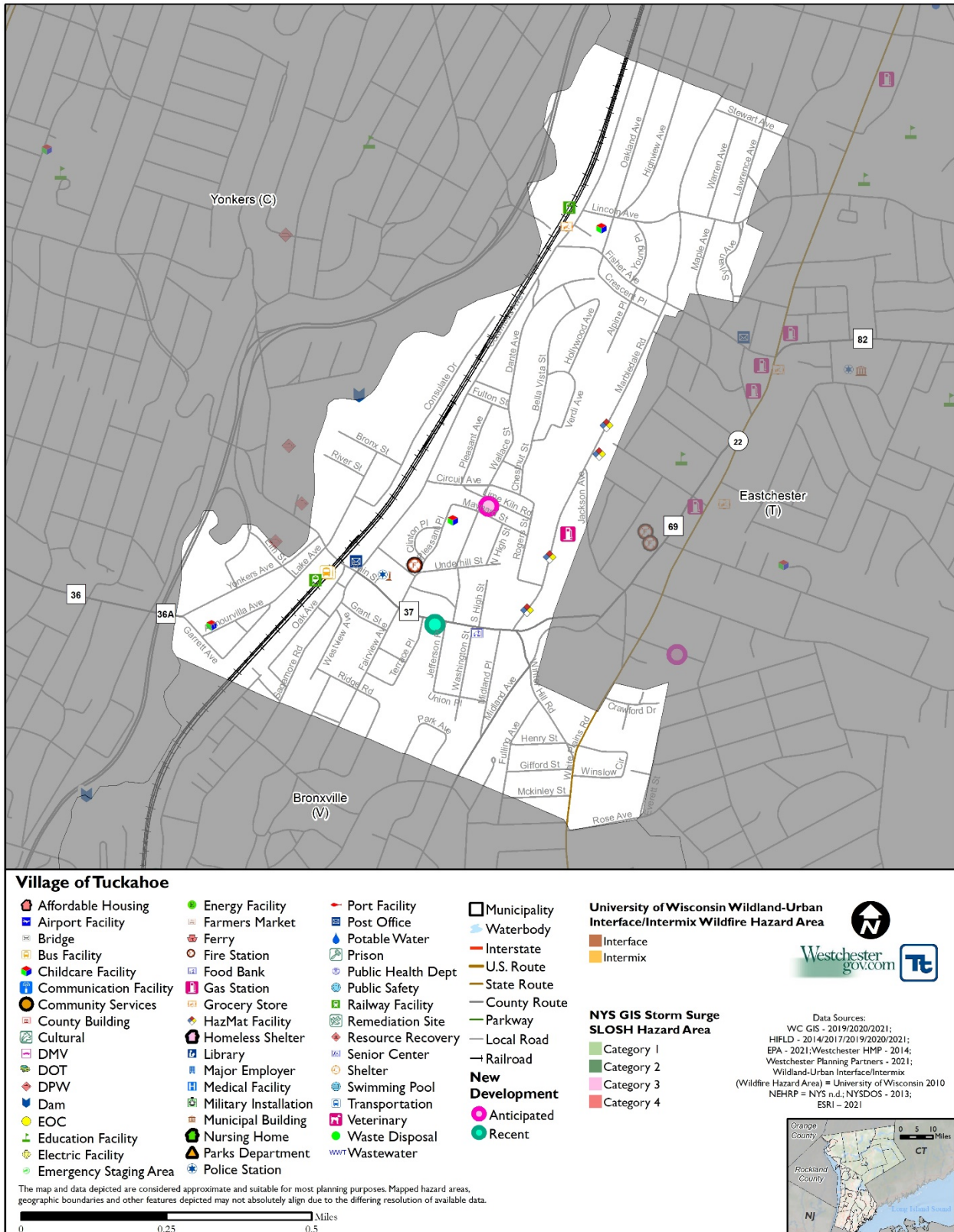


Figure 9.46-3. Village of Tuckahoe Hazard Area Extent and Location Map 3

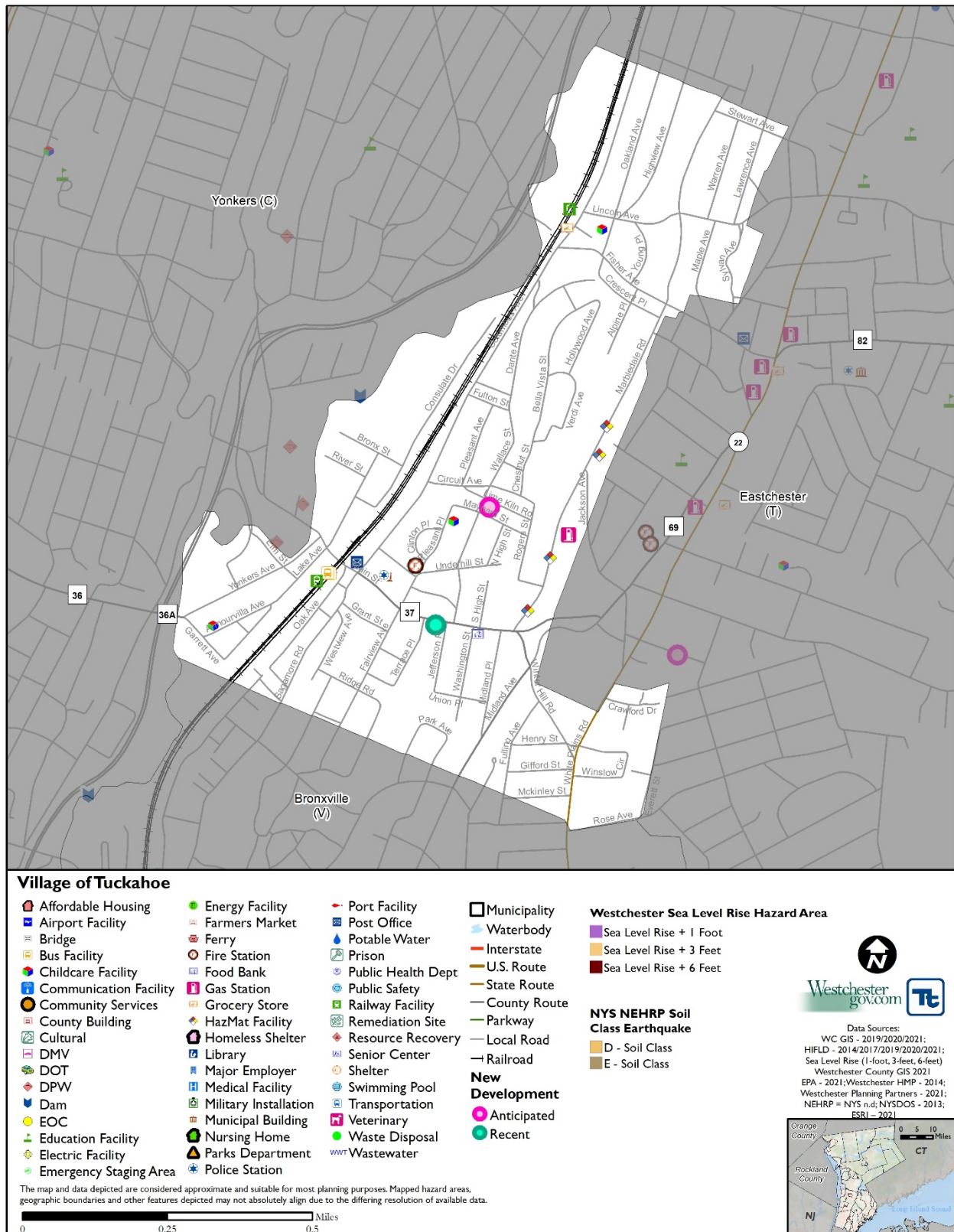


Figure 9.46-4. Village of Tuckahoe Hazard Area Extent and Location Map 4

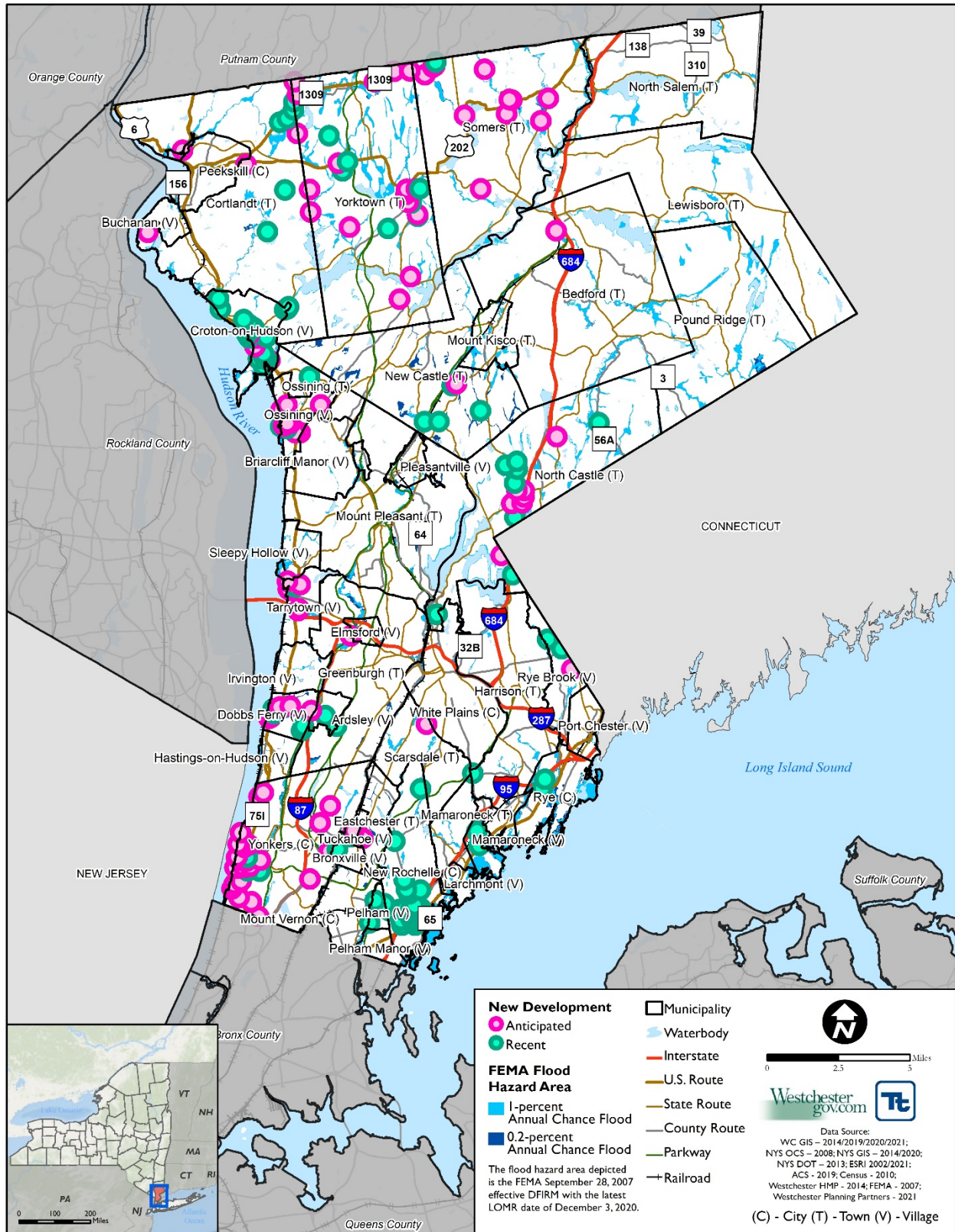
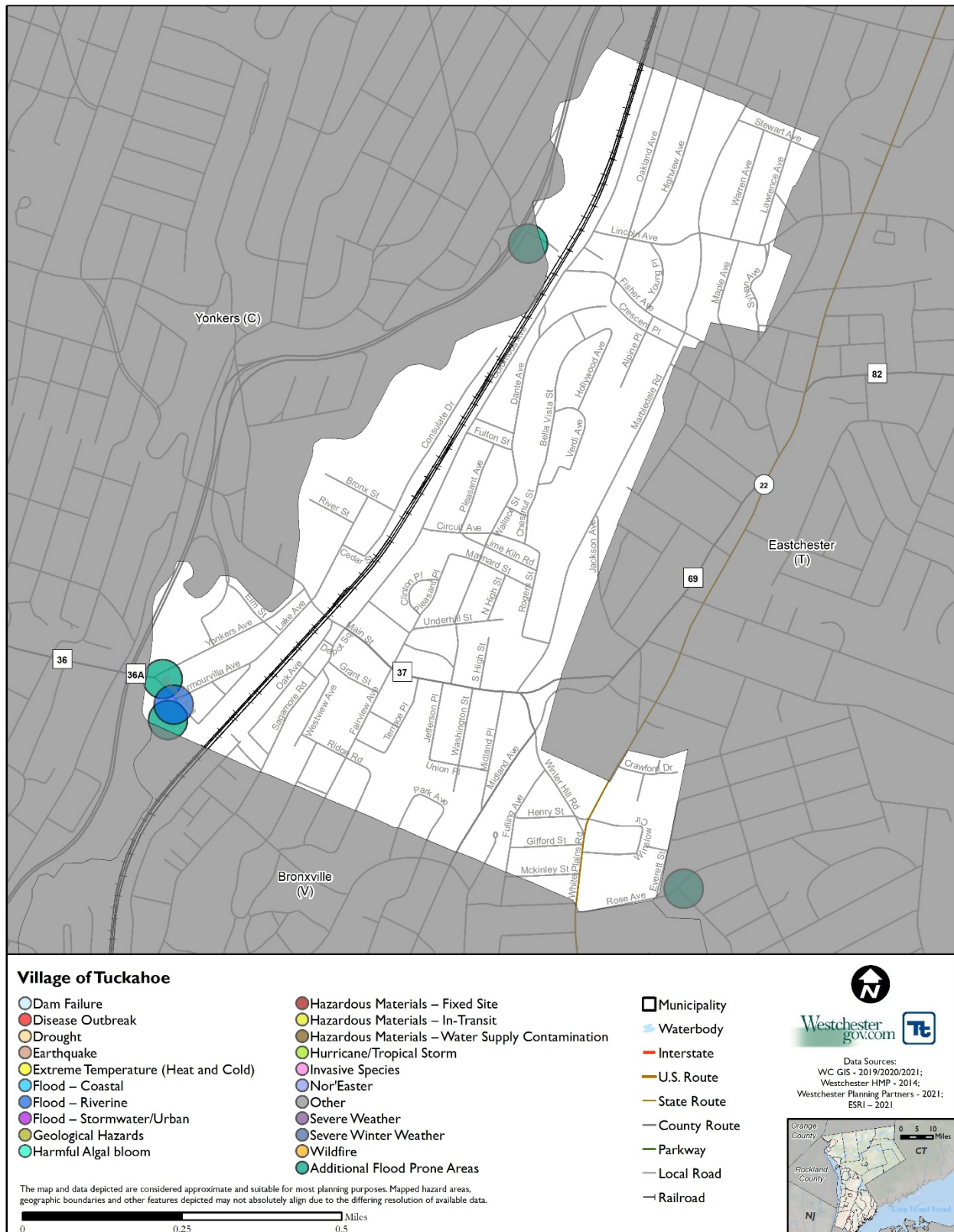


Figure 9.46-5. Village of Tuckahoe Hazard Area Extent and Location Map 5



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 Village of Tuckahoe’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 9.46-15 provides details regarding municipal-specific loss and damages the 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 9.46-15. 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.	Although the County was impacted, the Village did not report impacts.
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.	Although the County was impacted, the Village did not report impacts.
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.	Although the County was impacted, the Village did not report impacts.
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.	Debris removal require, damaged fencing on village facilities; damaged sidewalks due to trees being uprooted
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.	Revenue losses stemming from shutdowns – including significant parking. Increased OT cost for cleaning.

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 Village of Tuckahoe’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 Village of Tuckahoe. The Village of Tuckahoe 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 Village indicated the following:

- The Village agreed with the calculated hazard rankings.

Table 9.46-16. Hazard Ranking Input

Disease Outbreak	Earthquake	Extreme Temperature	Flood	Severe Storm	Severe Winter Storm	Wildfire	CBRN
Low	Low	Low	Medium	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 9.46-17. 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	
Koala Park LLC	Childcare Facility	Y	Y	7.1	23.8	2021-Village of Tuckahoe-006

Source: Westchester HMP 2021; FEMA 2007

Identified Issues

After review of the Village of Tuckahoe’s hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Village of Tuckahoe 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 Village will develop a list of “At Risk” structures and perform annual inspections and outreach. The Village has 6 repetitive loss properties, but other properties may be impacted by flooding as well.
- Drainage basins can back up and are sometimes lack the capacity needed, resulting in flooding.
- Failure of the Kensico Dam would be catastrophic for the Village. The City of New York Department of Environmental Protection sends updated information to the Village regarding the status of the dam.
- Due to the over development of land over the years, from the Village of Tuckahoe to the North end of White Plains, NY, pervious surfaces have diminished causing substantial flooding to the Bronx River Watershed. During periods of heavy precipitation, the area of Garret Avenue and BRP Reservation floods, impacting roadways and residential neighborhoods.
- The Village of Tuckahoe presently houses a shelter that does not have electrical backup power. The Community Center / Library - Shelter has been in existence since 1975. This site is typically used daily for senior events, day care center, summer camp, meeting center.
- The Village has one critical facility with flood exposure which is privately owned.
- The Village does not have designated emergency shelters and has not identified appropriate locations for the placement of temporary and permanent housing outside of the Special Flood Hazard Area.
- During very heavy rainfall and when the ground is already saturated, the duck pond at Lakeview Park sometimes floods. Regular dredging of the pond used to take place but has not been done. The pond is under the County’s jurisdiction.

9.46.8 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 9.46-18. 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.
Tuckahoe-1	Promote and support structural and non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (3 - RL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners. Specifically identified are properties in the following locations: <ul style="list-style-type: none"> Garrett Avenue Lake Avenue 	Flooding, Severe Storm	Municipal NFIP FPA; support from NYSOEM and FEMA	Bronx River Parkway Flooding during extreme weather events	No Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. 3.
Tuckahoe-2 old	Investigate the possibility of increasing the number of drainage basins in historical problem areas.	Flood	Village DPW	Drainage basins can back up	In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. 3.
Tuckahoe-3 old	Investigate the possibility of zoning restrictions necessary to reduce the effects of dam failure while also exploring the installation of a dam system failure warning system. Failure of the Kensico Dam would	All Hazards	County, Village DPW, Village Building	Emergency notification system for residents is needed	In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. The Village has instituted a Swift911 emergency email/text/call notification system for residents. 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.
	be catastrophic for the Village. Only The Village continues to pursue ideas and approaches to address a potential warning system. The City of New York Department of Environmental Protection sends updated information to the Village regarding the status of the dam.						
Tuckahoe-4 Old	Assure that building codes are strictly enforced to make new and renovated buildings as prepared as possible. The foundations should be water proof and elevated, if needed. Sandbags can be used to try to divert the water if there is any warning.	All Hazards	Village Building		Ongoing Capability	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1.Discontinue 2. 3.Ongoing Capability
Tuckahoe-5 old	Provide information and recommendations to schools, childcare and other special needs populations regarding retrofitting buildings as well as the preparation of their contents (bolting shelves to walls, etc.) for seismic activity on a case by case basis.	All Hazards	Village Building Department		Ongoing Capability	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3.Ongoing Capability
Tuckahoe-6 old	Develop a list of "At Risk" structures and perform annual inspections. At this time, one privately	All Hazards	Village Building Department and DPW		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.
	owned property has been identified. The owner has been unwilling to cooperate and remediate the property to become compliant. The Village and owner have been involved for many years in litigation. Where other issues persist, the Village is aware and will work as needed to compile a list.						
Tuckahoe-7	Choose to plant species of trees that can withstand harsher environments and conditions.	All Hazards	Village DPW		Ongoing Capability	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Discontinue 2. 3.Ongoing Capability
Tuckahoe-8 (LOI) 691	Flood Mitigation Project at Garrett Avenue: Village will construct an earthen berm and install portable stormwater pumps along Garrett Avenue in BRP Reservation to minimize volume of stormwater extending from Bronx River to residential neighborhood and pump stormwater runoff from neighborhood to Bronx River. See Action Worksheet.	Flood, Severe Storm, Severe Winter Storm	County Planning, Stormwater Management and Village	The Village has begun earnest conversations with the County of Westchester regarding viability of this projects; discussions are on-going	In Progress	Cost: Level of Protection: Damages Avoided; Evidence of Success:	1. Include in HMP Update 2. 3.
Tuckahoe-9 (LOI 1973)	Community Center/Library- Shelter Emergency Electrical Backup Generator	Hurricane, Nor'Easter, Severe Storm,	Village Administration	Facility could be used for emergency shelter but does not	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, No 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.
		Severe Winter Storm, Earthquake		have a backup generator			

Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Tuckahoe 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 Village of Tuckahoe 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 9.46-19. 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
Earthquake	X	X								X
Extreme Temperature	X	X								X
Flood	X	X		X		X	X		X	X
Severe Storm	X	X				X			X	X
Severe Winter Storm	X	X								X
Wildfire	X	X								X
CBRN	X	X								X

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

Table 9.46-20 summarizes the comprehensive-range of specific mitigation initiatives the Village of Tuckahoe 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 9.46-21 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.46-20. 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-Village of Tuckahoe -001	Repetitive Loss Mitigation	1, 2	Flood, Severe Storm	<p>Problem: Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has 6 repetitive loss properties, but other properties may be impacted by flooding as well.</p> <p>Solution: The Village will develop a list of “At Risk” structures and perform annual inspections and outreach. Conduct outreach to 10 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).</p>	No	None	3 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, EAP	PP, PI
2021-Village of Tuckahoe -002	Drainage Basins	1, 2	Flood, Severe Storm	<p>Problem: Drainage basins can back up and are sometimes lack the capacity needed, resulting in flooding.</p> <p>Solution: The Village will investigate the possibility of increasing the number of drainage basins in historical problem areas. Where feasible, the Village will install new drainage basins.</p>	No	None	Within 5 years	Engineer	High	Increased stormwater retention/detention capacity	BRIC, HMGP, 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
				Following this effort, the Village will establish yearly upgrades to basins										
2021-Village of Tuckahoe -003	Kensico Dam Flood Warning	1, 3	Flood	<p>Problem: Failure of the Kensico Dam would be catastrophic for the Village. The City of New York Department of Environmental Protection sends updated information to the Village regarding the status of the dam.</p> <p>Solution: The Village will investigate the possibility of zoning restrictions necessary to reduce the effects of dam failure and implement those restrictions which are feasible. The Village will also explore the installation of a dam system failure warning system.</p>	Yes	None	Within 5 years	County, Village DPW, Village Building	High for flood warning system	Flood warning system established for dam failure	BRIC, HMGP, Village budget	High	SIP	SP
2021-Village of Tuckahoe -004	Flood Mitigation Project at Garrett Avenue	1, 2	Flood, Severe Storm	<p>Problem: Due to the over development of land over the years, from the Village of Tuckahoe to the North end of White Plains, NY, pervious surfaces have diminished causing substantial flooding to the Bronx River Watershed. During periods of heavy precipitation, the area of Garret Avenue and BRP Reservation floods, impacting roadways and residential neighborhoods.</p> <p>Solution: The Village will construct an earthen berm and install stormwater pumps along Garrett Avenue in BRP Reservation to minimize volume of stormwater extending from Bronx River to residential neighborhood</p>	No	Permitting required	Within 5 years	County Planning, Stormwater Management and Village Engineer	High	Reduced or eliminated risk to property damage from flooding	HMGP, BRIC, 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
				and pump stormwater runoff from neighborhood to Bronx River.										
2021-Village of Tuckahoe -005	Community Center/Library Emergency Electrical Backup Generator	1, 2	All Hazards	<p>Problem: The Village of Tuckahoe presently houses a warming/cooling center that does not have electrical backup power. The Community Center / Library has been in existence since 1975. This site is typically used daily for senior events, day care center, summer camp, meeting center. If backup power is installed, the site could theoretically be used as an emergency shelter.</p> <p>Solution: The Engineer will research what size generator is needed to power the Community Center/ Library. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Community Center/ Library. Public Works will be responsible for maintenance and testing of the generator following installation.</p>	Yes	None	Within 5 years	Engineer, Public Works	\$225,000	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-Village of Tuckahoe -006	Critical Facility Flood Outreach	3	Flood	<p>Problem: The Village has one critical facility with flood exposure which is privately owned.</p> <p>Solution: The FPA will conduct outreach to facility managers to discuss flood exposure and potential options for mitigation.</p>	Yes 💧	None	Within 6 months	FPA	Staff time	Facility managers aware of flood exposure and potential mitigation options	Municipal budget	High	EAP	PI
2021-Village of Tuckahoe -007	Sheltering, Temporary and Permanent Housing	1, 2	All Hazards	<p>Problem: The Village does not have designated emergency shelters and has not identified appropriate locations for the placement of temporary and permanent housing</p>	No	None	6 months	Administration working with Westchester County	Staff time	Temporary and permanent housing locations identified	Village budget	High	LP R	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
				outside of the Special Flood Hazard Area. Solution: The Village will work with Westchester County to identify regional emergency shelters and appropriate locations for the siting of temporary and permanent housing within the region.										
2021-Village of Tuckahoe-008	Lakeview Park Duck Pond	2	Flood	Problem: During very heavy rainfall and when the ground is already saturated, the duck pond at Lakeview Park sometimes floods. Regular dredging of the pond used to take place but has not been done. The pond is under the County's jurisdiction. Solution: The Village will conduct outreach to the County and request maintenance and dredging of the pond to take place to reduce flood risk.	No	None	6 months	Administration, Westchester County	Staff time	County aware of need to address duck pond flooding	Village budget	High	EAP	PI

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

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGF 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.


Benefits:

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



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

Table 9.46-21. 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-Village of Tuckahoe-001	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Village of Tuckahoe-002	Drainage Basins	1	1	1	1	0	1	0	1	0	1	1	0	1	1	10	High
2021-Village of Tuckahoe-003	Kensico Dam Flood Warning	1	1	1	0	1	1	0	1	1	1	1	0	1	1	11	High
2021-Village of Tuckahoe-004	Flood Mitigation Project at Garrett Avenue	1	1	1	1	0	0	0	1	1	1	1	0	1	1	10	High
2021-Village of Tuckahoe-005	Community Center/ Library Emergency Electrical Backup Generator	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Village of Tuckahoe-006	Critical Facility Flood Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Village of Tuckahoe-007	Sheltering, Temporary and Permanent Housing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Village of Tuckahoe-008	Lakeview Park Duck Pond	0	1	1	1	1	1	1	1	1	1	0	1	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).

9.46.9 Action Worksheets

The following action worksheets have been developed by the Village of Tuckahoe 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-Village of Tuckahoe-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 Village has 6 repetitive loss properties, but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village will develop a list of "At Risk" structures and perform annual inspections and outreach. Conduct outreach to 10 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(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 <i>(in accordance with flood ordinance)</i>	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, Education and Awareness Program
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three 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:	
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Action Worksheet		
Project Name:	Repetitive Loss Mitigation	
Project Number:	2021-Village of Tuckahoe-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 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 Village.
Administrative	0	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Flood Mitigation Project at Garrett Avenue		
Project Number:	2021-Village of Tuckahoe-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Due to the over development of land over the years, from the Village of Tuckahoe to the North end of White Plains, NY, pervious surfaces have diminished causing substantial flooding to the Bronx River Watershed. During periods of heavy precipitation, the area of Garret Avenue and BRP Reservation floods, impacting roadways and residential neighborhoods.		
Action or Project Intended for Implementation			
Description of the Solution:	Village will construct an earthen berm and install stormwater pumps along Garrett Avenue in BRP Reservation to minimize volume of stormwater extending from Bronx River to residential neighborhood and pump stormwater runoff from neighborhood to Bronx River.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	500-year flood level	Estimated Benefits (losses avoided):	Reduction in flooding
Useful Life:	50 years	Goals Met:	1, 2, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 2 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, BRIC, Village budget
Responsible Organization:	County Planning, Stormwater Management and Village Engineer	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Raise roadways in the area	\$250,000	Flooding likely to impact property owners
	Elevate homes in the area	\$3 million	Costly and roadways still flood
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation and Prioritization		
Project Name:	Flood Mitigation Project at Garrett Avenue	
Project Number:	2021-Village of Tuckahoe-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect lives from flooding
Property Protection	1	The project will protect homes and municipal infrastructure (sewer system).
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	0	
Legal	0	The project is likely to require permitting
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	County Planning, Stormwater Management and Village Engineer
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Community Center/ Library Emergency Electrical Backup Generator		
Project Number:	2021-Village of Tuckahoe-005		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Village of Tuckahoe presently houses a warming/cooling center that does not have electrical backup power. The Community Center / Library has been in existence since 1975. This site is typically used daily for senior events, day care center, summer camp, meeting center. If backup power is installed, the site could theoretically be used as an emergency shelter.		
Action or Project Intended for Implementation			
Description of the Solution:	The Engineer will research what size generator is needed to power the Community Center/ Library. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Community Center/ Library. Public Works will be responsible for maintenance and testing of the generator following installation.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to 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:	\$225,000	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:	Community Center/ Library Emergency Electrical Backup Generator	
Project Number:	2021-Village of Tuckahoe-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Community Center/ Library as a warming/cooling center and allow potential for sheltering
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Village has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	