

SECTION 9. JURISDICTIONAL ANNEXES

9.4 TOWN OF CLARKSTOWN

This jurisdictional annex to the Rockland County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Clarkstown with reducing losses from future hazard events. This annex is not guidance of what to do when a disaster occurs; its focus is on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex presents a general overview of the Town of Clarkstown, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.4.1 Hazard Mitigation Planning Team

The Town of Clarkstown identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Police Seargent represented the community on the Rockland County HMP Planning Partnership and Steering Committee 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.

Table 9.4-1 summarizes Town officials who participated in the development of the annex and in what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume I.

Table 9.4-1. Hazard Mitigation Planning Team

| Primary Point of Contact | Alternate Point of Contact |
|--|--|
| Name/Title: Dan Maloney, Police Seargent Address: 20 Maple Ave, New City, NY 10956 Phone Number: (845) 499-8828 Email: d.maloney@clarkstownpd.org | Name/Title: James Fay Address: 20 Maple Ave. New City NY 10956 Phone Number: (845) 639-5830 Email: j.fay@clarkstownpd.org |
| National Flood Insurance Program Floodplain Administrator | |
| Name/Title: Michael Gianatasio, PE, Director, DEFM Address: 10 Maple Ave, New City, NY 10956 Phone Number: (845) 639-2111 Email: m.gianatasio@clarkstown.org | |
| Additional Contributors | |
| Name/Title: Christopher Wagner, Director of Engineering Method of Participation: Provided information for municipal annex on new development, capabilities, NFIP participation, mitigation strategies, and risk assessment. | |

9.4.2 Municipal Profile

The Town of Clarkstown is located along the eastern border of Rockland County. The Town is bordered to the north by the Town of Haverstraw and its inclusive villages, to the south by the Towns of Orangetown and its inclusive villages, to the west by the Town of Ramapo and its inclusive villages, and to the east by the Hudson

River. The following hamlets are found in the Town: Bardonia, Central Nyack, Congers, Nanuet, New City, Valley Cottage, and West Nyack. Lake DeForest, Lake Lucille, and the Hudson River are major bodies of water found throughout the Town. The Town has a total area of 46.9 square miles, of which 38.5 square miles is land and 8.4 square miles is water.

Research has shown that some populations are at greater risk from hazard events because of decreased resources or physical abilities. These populations can be more susceptible to hazard events based on a number of factors including their physical and financial ability to react or respond during a hazard, and the location and construction quality of their housing. Data from the 2017-2021 American Community Survey indicates that 4.6 percent of the population is 5 years of age or younger, 20.6 percent is 65 years of age or older, 5.2 percent is non-English speaking, 4.4 percent is below the poverty threshold, and 9.9 percent is considered disabled.

9.4.3 Jurisdictional Capability Assessment and Integration

The Town of Clarkstown performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume I describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment for this annex includes analyses of the following:

- Planning and regulatory capabilities
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Classification under various community mitigation programs
- Adaptive capacity to withstand hazard events

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into day-to-day local government operations. As part of the hazard mitigation analysis, planning and /policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. Development of an updated mitigation strategy provided an opportunity for the Town of Clarkstown to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.4-2 summarizes the regulatory tools that are available to Town of Clarkstown.

Table 9.4-2. Planning, Legal, and Regulatory Capability and Integration

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Responsible Person, Department or Agency |
|---|---------------------------------|--|---|--|
| <i>Codes, Ordinances, & Regulations</i> | | | | |
| Building Code | Yes | Town Code Chapter 109; 2022 | State, Local | Code Enforcement Officer |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| The Building Code has provisions to strengthen and elevate construction to withstand hazard forces, meet those outlined in the NFIP, and include development standards for withstanding storm surge, wind damage, earthquakes, and other hazards. | | | | |

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Responsible Person, Department or Agency |
|--|---------------------------------|--|---|---|
| Zoning/Land Use Code | Yes | Town Code Chapter 290, 1939 | Local | Building Inspector |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| The densest zoning districts are within and around the Town's Hamlet centers. Natural areas, which often contain or are proximate to streams, floodplains and wetland, and areas targeted for conservation are zoned for lower or the lowest development densities, or, when possible, acquired as open space/parkland or placed within conservation easements. Additionally, new development is required to reduce the post-development 100-year, twenty-four-hour peak discharge rate (Qr) to 10 percent less than predevelopment rates. Deductions to gross lot area are applied to areas of steep slopes, wetlands and areas underwater. | | | | |
| Subdivision Code | Yes | Town Code Chapter 254, 1987 | Local | Planning Board |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| Deductions to gross lot area are applied to areas of steep slopes, wetlands, and areas underwater. The regulations provide for conservation or cluster subdivisions to conserve environmental resources. | | | | |
| Site Plan Code | Yes | Town Code Chapter 246, 1986 | Local | Planning Board |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| The ordinance aims to ensure the health, safety, welfare, comfort and convenience of the public through several provisions, including Community Lifelines like means of access, water supply, storm drainage, and sanitary sewers. | | | | |
| Stormwater Management Code | Yes | Town Code Chapter 128, 1974, and Chapter 294A | Local | Director of Engineering and Facilities Management |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| Chapter 294A reduces flooding and erosion risks from construction by requiring minimum standards approved by NYSDEC. | | | | |
| Post-Disaster Recovery/ Reconstruction Code | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| N/A | | | | |
| Real Estate Disclosure | Yes | New York State (NYS) mandate, Property Condition Disclosure Act, NY Code – Article 14 §460-467 | State and local | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| The NYS mandate requires sellers to disclose to potential buyers whether their property is located in a designated floodplain. | | | | |
| Growth Management | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| N/A | | | | |
| Environmental Protection Ordinance | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| N/A | | | | |
| Flood Damage Prevention Ordinance | Yes | Town Code Chapter 146, 2014 | Federal, State, Local | Director of Engineering and Facilities Management |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| Chapter 146 reduces risk of flooding by requiring commercial and residential construction within the 100-yr floodplain to meet or exceed minimum standards that meet NFIP criteria. | | | | |
| Wellhead Protection | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| N/A | | | | |
| Emergency Management Ordinance | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> | | | | |
| N/A | | | | |

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Responsible Person, Department or Agency |
|---|---------------------------------|--|---|--|
| Climate Change Ordinance | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Other: Freeboard | Yes | State Code | State, Local | Town Engineer |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types. | | | | |
| Planning Documents | | | | |
| General/Comprehensive Plan | Yes | 2021 Comprehensive Plan | Local | Planning |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The future land-use map identifies natural hazard areas. Deductions to gross lot area are applied to areas of steep slopes, wetlands, and areas underwater. The densest zoning districts are within and around the Town’s Hamlet centers. Natural areas, which often contain or are proximate to streams, floodplains and wetland, and areas targeted for conservation are zoned for lower or the lowest development densities, or, when possible, acquired as open space/parkland or placed within conservation easements | | | | |
| Capital Improvement Plan | Yes | 2016 Capital Improvements Plan | Local | All Departments |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Infrastructure policies limit extending existing facilities and services that would encourage development in hazard-vulnerable areas. The plan provides funding for projects identified in the HMP. | | | | |
| Disaster Debris Management Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Floodplain Management or Watershed Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Stormwater Management Plan | Yes | Stormwater Management Program Plan (2013) | Local | DEC |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The plan includes best practices in areas that flooding affects the most. | | | | |
| Open Space Plan | Yes | 2021 Comprehensive Plan | Local | Planning |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The plan prioritizes open green spaces and are planned in areas with high impervious surface coverage. | | | | |
| Urban Water Management Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Habitat Conservation Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Economic Development Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Community Wildfire Protection Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Responsible Person, Department or Agency |
|--|---------------------------------|--|---|--|
| Community Forest Management Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Transportation Plan | Yes | 2021 Comprehensive Plan | Local | Planning |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The plan promotes compact, mixed-use development near transit hubs and away from high hazard areas. | | | | |
| Agriculture Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Climate Action/ Resiliency/Sustainability Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Tourism Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Business/ Downtown Development Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Other (for example NYRCR, etc.) | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Response/Recovery Planning | | | | |
| Comprehensive Emergency Management Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Continuity of Operations Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Substantial Damage Response Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Threat & Hazard Identification & Risk Assessment | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Post-Disaster Recovery Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |

| | Jurisdiction has this? (Yes/No) | Citation and Date (code chapter or name of plan, date of enactment or plan adoption) | Authority (local, county, state, federal) | Responsible Person, Department or Agency |
|--|---------------------------------|--|---|--|
| Public Health Plan | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |
| Other | No | - | - | - |
| <i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A | | | | |

Development and Permitting Capability

Table 9.4-3 summarizes the capabilities of Town of Clarkstown to oversee and track development.

Table 9.4-3. Development and Permitting Capability

| Indicate if your jurisdiction implements the following | Yes/No | Comment: |
|---|--------|---|
| Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? | No | Site plan and subdivision review and approval; building permits and Certificates of occupancy |
| Are permits tracked by hazard area? (For example, floodplain development permits.) | Yes | Floodplain development permits are required |
| Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe | No | - |
| Describe the level of build-out in your jurisdiction. | N/A | - |

Administrative and Technical Capability

Table 9.4-4 summarizes potential staff and personnel resources available to Town of Clarkstown and their current responsibilities that contribute to hazard mitigation.

Table 9.4-4. Administrative and Technical Capabilities

| Resources | Available? (Yes/No) | Comments (available staff, responsibilities, support of hazard mitigation) |
|----------------------------------|---------------------|--|
| <i>Administrative Capability</i> | | |
| Planning Board | Yes | Meets most Wednesdays at 7:30 PM in Town Hall. Approves site plans and subdivisions. Offers recommendations to the Town Board and Zoning Board on various zoning and planning matters. |
| Zoning Board of Adjustment | Yes | Meets Mondays, twice a month, except holidays at 7:00 PM in Town Hall. Considers zoning interpretations, special permits, and variances. |

| Resources | Available? (Yes/No) | Comments (available staff, responsibilities, support of hazard mitigation) |
|---|------------------------|--|
| Planning Department | Yes | <p>The Planning Department has a full time staff which performs all of the administrative functions associated with the Planning Board, Technical Advisory Committee (TAC), Zoning Board of Appeals (ZBA) and the Antenna Advisory Review Board (AAB), and provides information and guidance to town officials and the public relating to town planning and land use. The Planning Department ensures applications are acceptable for Planning Board review prior to placement on the Planning Board agenda and issues reviews and recommendations to the Planning Board, ZBA, TAC and AAB.</p> <p>The Planning Department works to update and develop zoning and land use plans throughout the Town. These plans are reflected in the Town’s Comprehensive Plan, which, when adopted by the Town Board, serves as a guide for land use planning and decisions throughout the Town. The Department obtains public input on these initiatives by coordinating and hosting public meetings and workshops.</p> <p>The Planning Department also employs a Geographic Information Systems (GIS) Coordinator who provides the town with digital mapping and geographic analysis services. The GIS Coordinator works to ensure the Town’s geographic information database is updated and continually expand the information it provides and regularly updates the Project Mapper on the Towns website to provide the public with information on projects before the Planning Board.</p> |
| Mitigation Planning Committee | No | - |
| Environmental Board/Commission | No | - |
| Open Space Board/Committee | No | - |
| Economic Development Commission/Committee | No | - |
| Public Works/Highway Department | Yes | The Clarkstown Highway Department provides professional maintenance for all Town roads and related drainage systems, snow plowing, annual yard waste and fall leaf collection, while regularly reviewing each practice for a more efficient and cost-effective approach. |
| Construction/Building/Code Enforcement Department | Yes | The Clarkstown Building Department issues permits for the Town. |
| Emergency Management/Public Safety Department | Yes | Police Department |
| Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.) | Yes | The Clarkstown Highway Department provides professional maintenance for all Town roads and related drainage systems, snow plowing, annual yard waste and fall leaf collection, while regularly reviewing each practice for a more efficient and cost-effective approach. |
| Mutual aid agreements | Yes | Rockland County OEM |
| 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 | - |

| Resources | Available? (Yes/No) | Comments (available staff, responsibilities, support of hazard mitigation) |
|--|------------------------|---|
| <i>Technical/Staffing Capability</i> | | |
| Planners or engineers with knowledge of land development and land management practices | Yes | Planning/TDEC |
| Engineers or professionals trained in building or infrastructure construction practices | Yes | TDEC |
| Planners or engineers with an understanding of natural hazards | Yes | Planning/TDEC |
| Staff with expertise or training in benefit/cost analysis | Yes | TDEC |
| Professionals trained in conducting damage assessments | Yes | Building/TDEC |
| Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications | Yes | Planning/TDEC |
| Environmental scientist familiar with natural hazards | No | - |
| Surveyor(s) | Yes | TDEC |
| Emergency Manager | Yes | CPD |
| Grant writer(s) | Yes | CPD/Supervisors office |
| Resilience Officer | No | - |
| Other (this could include stormwater engineer, environmental specialist, etc.) | No | - |

Fiscal Capability

Table 9.4-5 summarizes financial resources available to Town of Clarkstown.

Table 9.4-5. Fiscal Capabilities

| Financial Resources | Accessible or Eligible to Use? (Yes/No) |
|---|---|
| Community development Block Grants (CDBG, CDBG-DR) | Yes |
| Capital improvements project funding | Yes |
| Authority to levy taxes for specific purposes | Yes |
| User fees for water, sewer, gas or electric service | Yes – Sewer |
| Impact fees for homebuyers or developers of new development/homes | Yes - Stormwater |
| Stormwater utility fee | Yes |
| 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 | No |
| Other federal or state Funding Programs | Yes |
| Open Space Acquisition funding programs | Yes |
| Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution]) | N/A |

Education and Outreach Capability

Table 9.4-6 summarizes the education and outreach resources available to Town of Clarkstown.

Table 9.4-6. Education and Outreach Capabilities

| Outreach Resources | Available? (Yes/No) | Comment: |
|--|---------------------|--|
| Public information officer or communications office | Yes | Town Supervisor |
| Personnel skilled or trained in website development | Yes | Contracted |
| Hazard mitigation information available on your website | Yes | The Town of Clarkstown hosts a variety of information on its website for its residents. The Environmental Department has information regarding stormwater, recycling, and hazard mitigation; it also hosts a flood fact sheet from the NYS Emergency Management Office. The page on hazard mitigation details the reasons for hazard mitigation planning, and provides links to additional County, State, and Federal resources. Additional outreach mechanisms include emails, newsletters, Facebook and Twitter posts, community centers, and senior citizen meetings. |
| Social media for hazard mitigation education and outreach | Yes | Facebook, Twitter |
| Citizen boards or commissions that address issues related to hazard mitigation | No | - |
| Warning systems for hazard events | Yes | Rockland County has two alert notification systems (CodeRED and NYAlert) that the County manages and are accessible to the municipalities to send out messages. National Weather Service also sends out tornado, high wind, and flooding alerts regarding forecasted weather. The Town utilizes these systems and also sends out email blasts to residents as needed as well. |
| Natural disaster/safety programs in place for schools | No | - |
| Organizations that conduct outreach to socially vulnerable populations and underserved populations | No | - |
| Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events | No | - |

Community Classifications

Table 9.4-7 summarizes classifications for community programs available to Town of Clarkstown.

Table 9.4-7. 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 | - | - |
| New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community | Yes | None | 5/16/2011 |
| National Weather Service Storm Ready Certification | No | - | - |
| Firewise Communities classification | No | - | - |

| Program | Participating? (Yes/No) | Classification (if applicable) | Date Classified (if applicable) |
|---|-------------------------|--------------------------------|---------------------------------|
| Other: Organizations with mitigation focus (advocacy group, non-government) | No | - | - |

N/A = Not applicable
 — = 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, 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 9.4-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’s capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement.

Table 9.4-8. Adaptive Capacity

| Hazard | Adaptive Capacity - Strong/Moderate/Weak |
|-----------------------|--|
| Dam Failure | Moderate |
| Disease Outbreak | Moderate |
| Drought | Moderate |
| Earthquake | Moderate |
| Extreme Temperature | Moderate |
| Flood | Moderate |
| Landslide | Moderate |
| Severe Weather | Moderate |
| Severe Winter Weather | Moderate |
| Wildfire | Moderate |

9.4.4 National Flood Insurance Program Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.4-1 is responsible for maintaining this information.

NFIP Summary

Table 9.4-9 summarizes the NFIP statistics for Town of Clarkstown.

Table 9.4-9. Town of Clarkstown NFIP Summary of Policy and Claim Statistics

| | |
|--|-------------|
| # Policies | 322 |
| # Claims (Losses) | 941 |
| Total Loss Payments | \$9,346,749 |
| # Repetitive Loss Properties (NFIP definition) | 1 |
| # Repetitive Loss Properties (FMA definition) | 99 |
| # Severe Repetitive Loss Properties | 18 |
| # Policies Within the 1 percent Annual Chance Flood Boundary | 16 |

NFIP Definition of Repetitive Loss: The NFIP defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978.

FMA Definition of Repetitive Loss: FEMA’s Flood Mitigation Assistance (FMA) program defines a repetitive loss property as any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

Definition of Severe Repetitive Loss: A residential property covered under an NFIP flood insurance policy and: (a) That has at least four NFIP claim payments over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or (b) For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. At least two of the claims must have occurred within any 10-year period, more than 10 days apart.

Source: FEMA, December 2023

Note: RL count may include properties also identified as SRL.

Flood Vulnerability Summary

Table 9.4-10 provides a summary of the NFIP program in Town of Clarkstown.

Table 9.4-10. NFIP Summary

| NFIP Topic | Comments |
|---|--|
| Flood Vulnerability Summary | |
| Describe areas prone to flooding in your jurisdiction. | Flooding occurs during almost every rain event. Rivers and streams can no longer accommodate flood waters. |
| Do you maintain a list of properties that have been damaged by flooding? | No |
| Do you maintain a list of property owners interested in flood mitigation? | No |
| How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? | Unknown |
| Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway. | No |
| How do you make Substantial Damage determinations? | No* |
| How many Substantial Damage determinations were declared for recent flood events in your jurisdiction? | Unknown |
| How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded? | N/A |

| NFIP Topic | Comments |
|--|--|
| 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? | DEFM |
| Are any certified floodplain managers on staff in your jurisdiction? | No |
| Do you have access to resources to determine possible future flooding conditions from climate change? | Yes |
| 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? | No |
| Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability) | Permit review, inspections |
| How do you determine if proposed development on an existing structure would qualify as a substantial improvement? | Chapter 146 of the Town code defines a substantial improvement as any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which or exceeds 50 percent of the market value of the structure before the start of construction of the improvement |
| What are the barriers to running an effective NFIP program in the community, if any? | N/A |
| 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 |
| When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)? | May 8, 2024 |
| What is the local law number or municipal code of your flood damage prevention ordinance? | Town Code Chapter 146, 2014 |
| What is the date that your flood damage prevention ordinance was last amended? | 2014 |
| Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? | Meets minimum 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? | Any development proposed within the SFHA requires a floodplain development permit to obtain site plan approval |
| Does your community plan to join the CRS program or is your community interested in improving your CRS classification? | Not currently |

*Note: *The Town reported it does not have a process to make substantial damage determinations; however, during this planning process, it was confirmed that substantial damage determination provisions are established in both the adopted NFIP ordinance and adopted building code. This response has not been changed to accurately reflect the tools leveraged by the Town to mitigate risks.*

9.4.5 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 appreciating a jurisdiction’s overall risk to its hazards of concern. Recent

and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table 9.4-11 through Table 9.4-13.

Table 9.4-11. Number of Building Permits for New Construction Issued Since the Previous HMP*

| | New Construction Permits Issued | | | Total |
|---------------------|---|--------------|-------------------------------------|-------|
| | Single Family | Multi-Family | Other (commercial, mixed-use, etc.) | |
| 2019 | | | | |
| Total Permits | N/A – The Town does not issue building permits. | | | |
| Permits within SFHA | | | | |
| 2020 | | | | |
| Total Permits | N/A – The Town does not issue building permits. | | | |
| Permits within SFHA | | | | |
| 2021 | | | | |
| Total Permits | N/A – The Town does not issue building permits. | | | |
| Permits within SFHA | | | | |
| 2022 | | | | |
| Total Permits | N/A – The Town does not issue building permits. | | | |
| Permits within SFHA | | | | |
| 2023 | | | | |
| Total Permits | N/A – The Town does not issue building permits. | | | |
| Permits within SFHA | | | | |

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

Table 9.4-12. Recent Major Development and Infrastructure from 2018 to Present

| 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 |
|------------------------------|---------------------------|----------------------------------|---|-------------------------|-------------------------------------|
| Highland Vista Estates | Residential | 23 lot subdivision | 33.20-2-8 | None identified | Built |
| Little Tor Homes | Residential | 43 lot subdivision | 34.17-1-1 | None identified | Built |
| Halmar International | Commercial | 12,000 sq. ft. building addition | 64.10-2-4 | None identified | Built |
| Yellowstone Fields | Residential | 7 lot subdivision | 58.7-1-46 | None identified | Built |
| Phillips Hill Farm | Residential | 7 lot subdivision | 42.08-2-16 | None identified | Built |
| Greany Estates | Residential | 9 lot subdivision | 58.16-1-77 | None identified | Built |
| Little Tor Plaza | Commercial | 6,000 sq. ft. shopping mall | 51.13-2-35 | None identified | Built |
| Vincent’s Village | Senior/Low-income housing | 4 buildings | 63.11-2-13 | None identified | Built |
| Hamptonburgh Distribution | Commercial | 2,500 sq. ft. building | 65.10-1-11 | Flood: 1 percent chance | Built |
| Valley Cottage Fire House | Commercial | 20,000 sq. ft. firehouse | 59.7-2-3 | None identified | Built |
| Regency Developers | Residential | 4 lot subdivision | 52.20-1-25 | None identified | Built |
| Capital senior housing | Senior housing | 80 units | 43.7-1-2 | None identified | Built |
| Mulberry Hill | Residential | 6 lot subdivision | 52.20-1-98 | None identified | Built |

| 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 |
|------------------------------|---------------------|----------------------------------|---|-----------------------|-------------------------------------|
| Premier Storage | Commercial | 60,000 sq. ft. building | 35.19-2-7 | None identified | Built |
| Chartwell Pharmaceuticals | Commercial | 95,000 sq. ft. building | 44.7-2-12 | None identified | Built |
| L’Dor | Assisted living | 41,000 sq. ft. building | 50.12-1-4 & 5 | None identified | Built |
| SMK Endicott | Residential | 4 lot subdivision | 44.11-2-81 | None identified | Built |
| The Reserve | Senior Housing | 127 units | 51.19-2-19 | None identified | Under construction |
| Thruway plaza | Commercial | 3 buildings | 57.19-1-10 | None identified | Built |
| Jawonio | Commercial | 50,000 sq. ft. building | 43.5-1-9 | None identified | Built |
| Vitane Pharmaceutical | Commercial | 18,000 sq. ft. building addition | 44.11-3-3 | None identified | Under construction |
| Kennelly Square | senior housing | 27 units | 44.20-4-55 | None identified | Under construction |
| 101 S. Main St | Commercial | 8,750 sq. ft. building | 43.19-1-9 | None identified | Under construction |
| Lincoln Logistics | Commercial | 220,000 sq. ft. warehouse | 52.15-1-82 | None identified | Under construction |
| West Nyack Medical Building | Commercial | 60,000 sq. ft. building | 64.08-3-7.4 | None identified | Built |
| Aptar | Commercial | 30,456 sq. ft. building addition | 35.20-1-9 | None identified | Under construction |
| 135 North Main St | Senior housing | 47 units | 43.15-1-15 | None identified | Under construction |

* Only location-specific hazard zones or vulnerabilities identified.

Table 9.4-13. Known or Anticipated Major Development and Infrastructure in the Next Five Years

| 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 |
|--|---------------------|-------------------------|---|-----------------------|-------------------------------------|
| No known or anticipated major development and infrastructure reported. | | | | | |

* Only location-specific hazard zones or vulnerabilities identified.

9.4.6 Jurisdictional Risk Assessment

The hazard profiles in Volume I provide detailed information regarding each planning partner’s vulnerability to the identified hazards, including summaries of the Town of Clarkstown’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.4-1 through Figure 9.4-2. 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 are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Clarkstown has significant exposure. The maps show the location of potential new development, where available.

Figure 9.4-1. Town of Clarkstown Flood and Dam Inundation Hazard Area Extent and Location

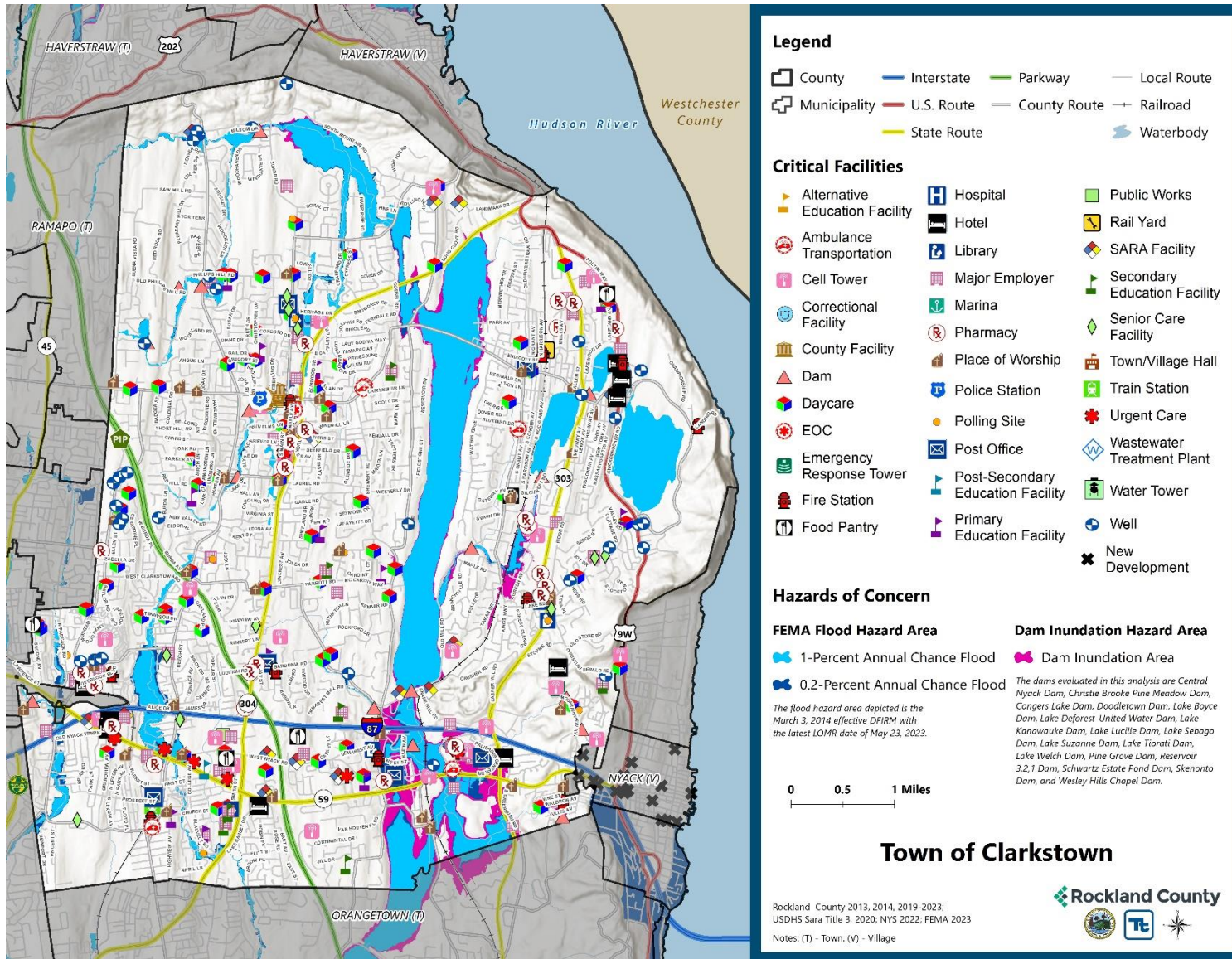
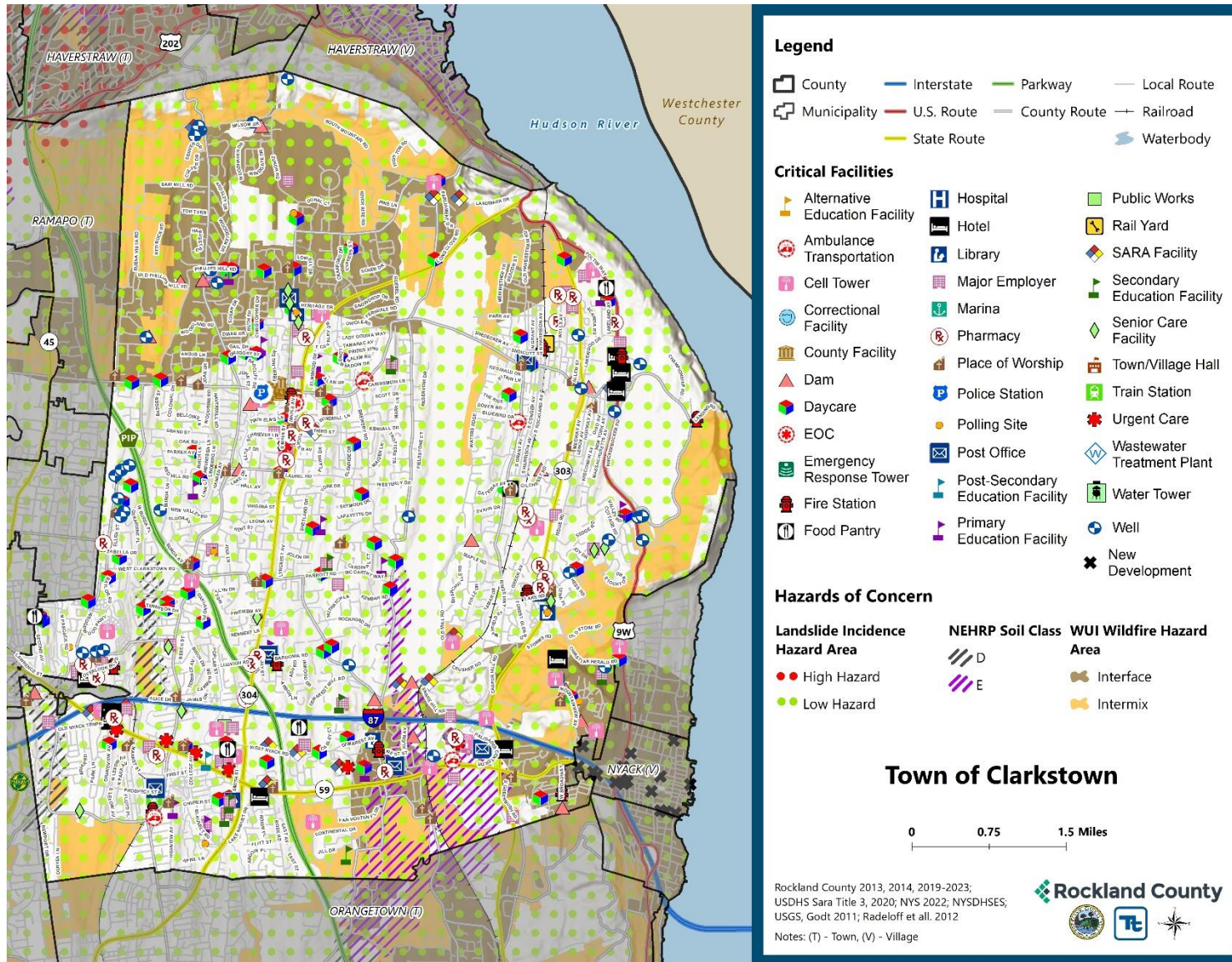


Figure 9.4-2. Town of Clarkstown Landslide, Earthquake, and Wildfire Hazard Area Extent and Location



Hazard Event History

The history of natural and non-natural hazard events in the Town of Clarkstown is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.4-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.4-14. Hazard Event History in the Town of Clarkstown

| Dates of Event | Event Type (Disaster Declaration if applicable) | County Designated? | Summary of Event | Summary of Damage and Losses in the Town |
|---------------------------------|---|--------------------|--|--|
| January 20, 2020 - May 11, 2023 | New York Covid-19 (3434-EM-NY, 4480-DR-NY) | Yes | The Covid-19 pandemic resulted in nationwide shutdowns, social distancing and masking requirements, and immunization efforts. Since the start of the pandemic, roughly 950 deaths have been reported in Rockland County. The federal Public Health Emergency expired in May 2023 but illness continues to occur as the virus shifts to becoming endemic. | - |
| April 13, 2020 | High Winds | | High winds across the county led to downed trees, power outages, closed roads, | \$200,000 in property damage |
| August 4, 2020 | New York Tropical Storm Isaias (4567-DR-NY) | Yes | The center of Isaias passed about 65 miles west of New York City at 3 pm on August 4, 2020. Tropical storm force winds extended well east of the center of circulation. In addition, 1 to 3 inches of rainfall, highest west, were recorded across the county. These types of winds and rainfall across the area resulted in numerous trees and tree limbs being downed, power outages, damages to homes and automobiles, and disruption to transit. | - |
| August 21-24, 2021 | New York Hurricane Henri (3565-EM-NY) | Yes | Rainfall from Tropical Storm Henri resulted in widespread flash flooding across southeastern New York, particularly portions of the Lower Hudson Valley. Rainfall totals generally ranged from 2-5 inches, with this rain coming in addition to the 2-5 inches that fell during the predecessor rainfall event the night before. | - |

| Dates of Event | Event Type (Disaster Declaration if applicable) | County Designated? | Summary of Event | Summary of Damage and Losses in the Town |
|---------------------|---|--------------------|---|--|
| September 1-3, 2021 | New York Remnants of Hurricane Ida (3572-EM-NY, 4615-DR-NY) | Yes | Extremely heavy rainfall associated with the remnants of Hurricane Ida overspread southeast New York during the evening of September 1 and continued through the early morning hours of September 2. Rainfall totals ranged from 5-8 inches across much of the region, with much of that rain falling in just a few hours. This resulted in widespread catastrophic flash flooding. | - |
| July 9-10, 2023 | Severe Storm, Flooding | | Severe storms and flooding resulted in road closures, including portions of the Palisades Interstate Parkway, throughout Rockland County. | - |

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 Volume I have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes presents key risk assessment results for the Town of Clarkstown.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its own degree of risk to each hazard. The community-specific hazard ranking is based on problems and impacts identified by the risk assessment presented in Volume I. The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; community capabilities to address the hazard; and changing future climate conditions. Clarkstown reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Town indicated the following:

- The Town revised the Flood ranking from Medium to High because the area has been experiencing increasing in flooding, which is occurring in almost every rain event. Rivers and streams can no longer accommodate flood waters.

Table 9.4-15 shows Clarkstown’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.4-15. Hazard Ranking

| Hazard | Rank |
|------------------|--------|
| Dam Failure | Low |
| Disease Outbreak | Medium |
| Drought | Medium |

| Hazard | Rank |
|-----------------------|--------|
| Earthquake | Low |
| Extreme Temperature | Medium |
| Flood | High |
| Landslide | Low |
| Severe Weather | High |
| Severe Winter Weather | High |
| Wildfire | Medium |

Note: The scale is based on the hazard rankings established in Volume I, modified as appropriate based on review by the jurisdiction

Critical Facilities

Table 9.4-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.4-16. Critical Facilities Flood Vulnerability

| Name | Type | Exposure | | Addressed by Proposed Action | Already Protected to 0.2 percent Flood Level (describe protections) |
|----------------------------------|----------------|-----------------|-------------------|------------------------------|---|
| | | 1 percent Event | 0.2 percent Event | | |
| Camp Jawonio Pond Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Congers Lake Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Heatons Pond Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Lake Deforest Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Lake Hyenga Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Lake Lucille Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| New City Dam #1 | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Nob Hill Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Swartwout Lake Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Demarest Mill Creek Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Klein Avenue Detention Basin Dam | Dam | Yes | Yes | 2024-Clarkstown-06 | No |
| Jawonio, Inc. | Daycare | Yes | Yes | 2024-Clarkstown-06 | No |
| Howard Hanna Rand Realty | Major Employer | Yes | Yes | 2024-Clarkstown-06 | No |
| Shoprite | Major Employer | Yes | Yes | 2024-Clarkstown-06 | No |
| AFC Urgent Care Nanuet | Urgent Care | Yes | Yes | 2024-Clarkstown-06 | No |
| Candy Mountain Day Camp Well | Well | Yes | Yes | 2024-Clarkstown-06 | No |
| Nyack Village Water Co Intake | Well | Yes | Yes | 2024-Clarkstown-06 | No |

Source: Rockland County 2023, FEMA

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in or could impact Town of Clarkstown:

- Central Nyack Dam

Identified Issues

After review of the Town of Clarkstown's hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Clarkstown identified the following vulnerabilities within their community:

- The Town has identified many roadways, specifically County owned roads, that repeatedly flood due to an increase in precipitation from severe storms and severe winter storms. Many roadways, in particular County roads, repeatedly flood. Flood-prone roads can inhibit emergency response and evacuation during a flood or severe storm.
- The Town's floodplain ordinance was last updated in 2014 and may be less effective than current regulations require. The code needs to be updated to reflect current FEMA regulations and changes to the 2014 FEMA mapping to address flood and severe storm issues.
- The Town's floodplain management and ordinance enforcement staff are not Certified Floodplain Managers and flooding is becoming more common and frequent from severe storms and severe winter storms.
- The Town does not participate in CRS and could benefit from the associated incentives for flooding and severe storm events. The Town needs to identify whether or not joining the program will be beneficial to the community and its residents.
- There are properties in the Town that experience repetitive flood damage from severe storm events. Flood-vulnerable properties place an undue stress on the property owner and Town.
- There are multiple dams, major employers, daycares, urgent cares, wells, and other critical facilities in the Town that are in the floodplain and potentially vulnerable to flood events and dam failures as identified during the Rockland County HMP update. The Town does not have jurisdiction over all these structures to mitigate.
- Frequency and severity of flooding on Route 59 near Route 303 and the Palisades Mall has increased significantly within recent years as a result of more frequent and intense storm events. The road has been closed due to flooding from severe storm events nine times within the last 12 months. It is a main artery for commercial businesses in the Town and region and for police, fire and EMS and is traveled by 45,000 vehicles daily. The flooding is a result of backwatering of the Hackensack River and tributary NJ1-9-2-4 to the Hackensack.
- There are several properties near West Nyack Road and Klein Avenue that experience re-occurring flooding due to undersized culverts and an influx of water from severe storm events.
- There is flooding of several properties at Jeffrey Court, along the West Nyack west of the Hackensack River and south of Old Mill Road from severe storm events.
- Several residential properties near Hereford Lane in West Nyack experience re-occurring flooding due to an undersized culvert that overtops during severe storm events.
- The municipality does not have a Substantial Damage Management Ordinance, nor do they have a standard process in place when conducting substantial damage determinations. The Town has substantial damage determination provisions in both the adopted NFIP ordinance and adopted building code, but staff are unaware of these provisions and do not leverage them.

**This issue was identified as a specific area of concern based on resident response to the Rockland County Hazard Mitigation Citizen survey.*

9.4.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.4-17 indicates progress on the Town’s mitigation strategy identified in the 2019 HMP. Actions that are still recommended but not completed or that are in progress are carried forward and combined with new actions as part of the mitigation strategy for this plan update. Previous actions that are now ongoing programs and capabilities are indicated as such and are presented in the capability assessment earlier in this annex.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.4-17, Town of Clarkstown identified the following mitigation efforts completed since the last HMP:

- The Klein Avenue levee received FEMA HMGP funding and removed approximately 40 homes from the 100-year floodplain. Damage estimates submitted by homeowners for three storms (Hurricane Irene (2011) Hurricane Lee (2011) Hurricane Sandy (2012) which occurred prior to the levee project totaled \$1,773,412.00. There have been several storms which have occurred since the levee was completed which have generated as much or more rainfall than the three storms listed above. There has been no significant flood damage in the project area since the completion of the levee project.

Table 9.4-17. Status of Previous Mitigation Actions

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|---|---------------------|-------------------|---|---|--|
| CT-1 | Klein Avenue Levee | Flooding | TDEC | <p>The height of the existing levee is not high enough to protect the area from increasing flood levels.</p> <p>Raise the height of the existing levee, Klein Ave.</p> | <p>1. Completed</p> <p>2. Received FEMA HMGP funding. Removed approximately 40 homes from the 100-year floodplain. Damage estimates submitted by homeowners for three storms (Hurricane Irene (2011) Hurricane Lee (2011) Hurricane Sandy (2012) which occurred prior to the levee project totaled \$1,773,412.00. There have been several storms which have occurred since the levee was completed which have generated as much or more rainfall than the three storms listed above. There has been no significant flood damage in the project area since the completion of the levee project.</p> | <p>1. Discontinue</p> <p>2. N/A</p> <p>3. Action completed.</p> |
| CT-2 | Flood-prone Roadways Mitigation Solutions | Flooding | TDEC | <p>Many roadways, in particular County roads, repeatedly flood.</p> <p>Develop specific mitigation solutions for flood prone road systems (roads, bridges, intersections, drainage, etc.) under the leadership of County DPW.</p> | <p>1. In Progress</p> <p>2. N/A</p> | <p>1. Include</p> <p>2. Revised problem and solution descriptions.</p> <p>3. N/A</p> |

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|--|---------------------|-------------------|---|---|--|
| CT-3 | Critical Facility Protections | All Hazards | CPD, OEM | <p>Critical facilities in the Town are old and may need additional or stronger protections from natural hazards.</p> <p>Determine the year built and level of protection for critical emergency facilities and shelters to highlight structures built before codes and standards were put in place to provide some degree of protection from natural hazards and pursue potential mitigation opportunities to protect these sites as funding becomes available.</p> | <p>1. In Progress 2. N/A</p> | <p>1. Discontinue 2. N/A 3. This is an ongoing capability of the Town's, and this information can be revised or examined on an as-needed basis or when seeking grant funding.</p> |
| CT-4 | Floodplain Management Ordinance FIRM Updates | Flooding | TDEC | <p>The flood damage prevention ordinance may not be consistent with the most updated FEMA FIRMs.</p> <p>Update/review floodplain management ordinances to be consistent with potential future new FIRMs.</p> | <p>1. In Progress 2. Draft updates completed and submitted to NYSDEC for review. Town Attorney to schedule public hearing to adopt new local law once review by NYSDEC is complete.</p> | <p>1. Include 2. Strategy updated to reflect current progress. 3. N/A</p> |
| CT-5 | Certified Floodplain Managers | Flooding | TDEC | <p>There are no Certified Floodplain Managers (CFMs) on the Town.</p> <p>Recommend staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs).</p> | <p>1. No Progress 2. N/A</p> | <p>1. Include 2. N/A 3. N/A</p> |

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|-------------------------------|------------------------|-------------------|---|--|--|
| CT-6 | Community Rating System (CRS) | Flooding | TDEC | The Town is subject to flooding and would like to consider joining the Community Rating System (CRS). Join the Community Rating System (CRS). | 1. No Progress 2. N/A | 1. Include 2. Revised problem and solution descriptions. 3. N/A |
| CT-7 | NFIP Capabilities | Flooding, Severe Storm | FPA | The Town currently does not maintain a list of repetitive loss properties or of property owners who may be interested in flood mitigation measures. Identify and document repetitively flooded properties. Work with owners to explore mitigation opportunities for repetitively flooded properties, and if appropriate and feasible, carry out acquisition, relocation, elevation and floodproofing measures to protect these properties. | 1. In Progress 2. N/A | 1. Include 2. Revised descriptions. 3. N/A |

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|--------------------------|---------------------|-------------------|---|--|--|
| CT-8 | Natural Hazard Risk Maps | All Hazards | Town Board | <p>The Town does not have maps developed of all natural hazard risk areas in Town.</p> <p>Develop and maintain mapping of all natural hazard risk areas in the Town, FEMA delineated or otherwise, to support land use decision making (e.g., Planning Board, site plan review process)</p> | <p>1. In Progress</p> <p>2. Town GIS coordinator adds map data to the Town's GIS database as it becomes available from various sources.</p> | <p>1. Discontinue</p> <p>2. This is an ongoing capability of the Town's and can be addressed on an as-needed basis as data is updated or becomes available.</p> <p>3. N/A</p> |

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|-----------------------------------|---------------------|---|---|--|--|
| CT-9 | Critical Facilities in Floodplain | Flooding | Private Property Owners with Town support | <p>The following critical facilities are located in the floodplain and identified as vulnerable to the flood hazard:</p> <ul style="list-style-type: none"> • St. Anthony School (privately owned) • RPS Medic 5 (privately owned) • O&R West Nyack Operating Center (privately owned) • West Nyack Post Office (privately owned) • Pascack Wastewater Pump (owned by Rockland County Sewer District #1) <p>The Town does not have jurisdiction over these facilities to mitigate. The Town will notify the facility manager/operator of these critical facilities regarding their flood vulnerability as identified during the Rockland County HMP update and NYS' requirement to protect to the 500-year flood or worst-case scenario. The Town will provide the owners information regarding grant options for funding to implement their mitigation.</p> | <ol style="list-style-type: none"> 1. Include 2. N/A | <ol style="list-style-type: none"> 1. Include 2. Updated information. 3. N/A |

| Project Number | Project Name | Hazard(s) Addressed | Responsible Party | Brief Summary of the Original Problem and the Solution (Project) | Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation | Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why. |
|----------------|-------------------------------------|------------------------|--------------------------------------|--|---|--|
| CT-10 | Nauraushaun Stream Flood Mitigation | Flooding, Severe Storm | Drainage Agency, NYS DOT, Clarkstown | The Nauraushaun Stream runs near the Palisades Mall, causing the nearby roadways to flood. Coordinate with NYS regarding flooding at the Palisades Mall (Route 303 and 59). | 1. In Progress 2. Town is in discussions with the US Army Corps. of Engineers regarding possible solutions to the flooding issue. Dredging of the Hackensack River to provide additional flow capacity has been discussed. | 1. Include 2. Updated strategy description to reflect current progress. 3. N/A |

Proposed Hazard Mitigation Initiatives for the HMP Update

Clarkstown participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included review of the following FEMA documents:

- FEMA 551 “Selecting Appropriate Mitigation Measures for Floodprone Structures” (March 2007)
- FEMA “Mitigation Ideas—A Resource for Reducing Risk to Natural Hazards” (January 2013).

The action worksheets included at the end of this annex list the mitigation actions that Clarktown would like to pursue in the future to reduce the effects of hazards. The actions 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 the Town’s priorities.

Table 9.4-18 indicates the range of proposed mitigation action categories. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Volume I identifies 14 evaluation criteria for prioritizing the mitigation actions. To assist with rating each mitigation action as high, medium, or low priority, a numeric rank is assigned (-1, 0, or 1) for each of the evaluation criteria. Table 2-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.4-18. Analysis of Mitigation Actions by Hazard and Category

| Hazard | FEMA | | | | CRS | | | | | |
|-----------------------|------|-----|-----|-----|-----|----|----|----|----|----|
| | LPR | SIP | NSP | EAP | PR | PP | PI | NR | SP | ES |
| Dam Failure | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |
| Disease Outbreak | - | - | - | 1 | - | - | 1 | - | - | - |
| Drought | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |
| Earthquake | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |
| Extreme Temperature | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |
| Flood | 4 | 6 | 1 | 4 | 6 | 6 | 2 | 1 | 1 | 1 |
| Landslide | 1 | - | - | -1 | 1 | - | 1 | - | - | 1 |
| Severe Weather | 4 | 6 | 1 | 4 | 6 | 6 | 2 | 1 | 1 | 1 |
| Severe Winter Weather | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |
| Wildfire | 1 | - | - | 1 | 1 | - | 1 | - | - | 1 |

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 structures to reduce the impact of hazards.

Natural Systems Protection (NSP)—These are actions that minimize damage and losses and 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

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 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 9.4-19. Summary of Prioritization of Actions

| Project Number | Project Name | Life Safety | Property Protection | Cost-Effectiveness | Political | Legal | Fiscal | Environmental | Social Vulnerability | Administrative | Hazards of Concern | Climate Change | Timeline | Community Lifelines | Other Community Objectives | Total | High / Medium / Low |
|----------------------------|---|-------------|---------------------|--------------------|-----------|-------|--------|---------------|----------------------|----------------|--------------------|----------------|----------|---------------------|----------------------------|-------|---------------------|
| 2024-Clarkstown-01 | Flood-prone Roadway Mitigation Solutions | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 7 | Medium |
| 2024-Clarkstown-02 | Update Floodplain Management Ordinance | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 9 | Medium |
| 2024-Clarkstown-03 | Certified Floodplain Manager Training | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 6 | Low |
| 2024-Clarkstown-04 | Community Rating System (CRS) | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | Low |
| 2024-Clarkstown-05 | Document Flood-prone Properties | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | High |
| 2024-Clarkstown-06 | Critical Facilities in the Floodplain | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | High |
| 2024-Clarkstown-07 | Routes 59 and 303 Flood Mitigation | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 11 | High |
| 2024-Clarkstown-08 | West Nyack Road Culvert Replacements | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | High |
| 2024-Clarkstown-09 | Jeffrey Court Levee | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 9 | Medium |
| 2024-Clarkstown-10 | Hereford Land Culvert Replacement | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | High |
| 2024-Clarkstown-11 | Substantial Damage Determination Training and Resources | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | High |
| Action 2024-ClarkstownT-12 | Socially Vulnerable Populations Outreach | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | High |

Note: Volume I, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).

Action 2024-Clarkstown-01. Flood-prone Roadway Mitigation Solutions

| | | |
|---|---|--|
| Action Name: | 2024- Clarkstown -01. Flood-prone Roadway Mitigation Solutions | |
| Description of the Problem: | The Town has identified many roadways, specifically County owned roads, that repeatedly flood due to an increase in precipitation from severe storms and severe winter storms. Flood-prone roads can inhibit emergency response and evacuation during a flood or severe storm. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | The Town will develop specific mitigation solutions for flood-prone road systems (roads, bridges, intersections, drainage, etc.) under the leadership of County DPW, including but not limited to Cranford Dr, Klein Ave, Rt 59/Rt 303, Jeffrey Ct / Strawtown Rd, West Nyack Hamlet, Mountain Shadows Embankment, and South Mountain Rd steep roads. | |
| Lead Agency: | TDEC and DPW | |
| Supporting Agencies: | Rockland County Highway Department | |
| Estimated Cost: | High (> \$100,000) | |
| Potential Funding Sources: | Local, State, FEMA HMA, FMA, BRIC | |
| Implementation Timeline: | Short-term (< 5 years) | |
| Goals Met: | 1, 2, 4 | |
| Benefits: | This action allows for a reduction in flood events in the Town. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | This project aims to ensure the accessibility of roadways during flooding events and ensures access to emergency routes and critical facilities. | |
| Impact on Capabilities: | This action strengthens the Town’s capability to work with the County and improve roadways. | |
| Impact on Future Development: | This project can help mitigate potential damage along any affected roadways. | |
| Climate Change Considerations: | Climate change is leading to an increase in frequency and intensity of precipitation events, which leads to an increase in flooding. | |
| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input checked="" type="checkbox"/> Medium |
| | | <input type="checkbox"/> Low |
| Alternatives | Action | Alternatives |
| | No action | Problem persists |
| | Raise or relocate roadways | Not feasible and does not reduce or eliminate vulnerability |

Action 2024-Clarkstown-02. Update Floodplain Management Ordinance

| | | | |
|---|--|--|---------------------------------------|
| Action Name: | 2024- Clarkstown -02. Update Floodplain Management Ordinance | | |
| Description of the Problem: | The Town’s floodplain ordinance was last updated in 2014 and may be less effective than current regulations require. The code needs to be updated to reflect current FEMA regulations and changes to the 2014 FEMA mapping to address flood and severe storm issues. | | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire | |
| Description of the Solution: | The Town will update flood damage prevention chapter of Town code using model Town law provided by NYSDEC. | | |
| Lead Agency: | DEFM | | |
| Supporting Agencies: | Town Attorney, Town Board | | |
| Estimated Cost: | Low (< \$10,000) | | |
| Potential Funding Sources: | Local | | |
| Implementation Timeline: | Short-term (< 5 years) | | |
| Goals Met: | 1, 2, 3, 7 | | |
| Benefits: | The Town will have a stronger floodplain ordinance. | | |
| Mitigation Action Type: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) | |
| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) | |
| Impact on Socially Vulnerable Populations: | N/A | | |
| Impact on Critical Facilities/Lifelines: | This updated ordinance will protect the Town’s critical facilities better. | | |
| Impact on Capabilities | A stronger ordinance will allow the Town to enforce more protective standards. | | |
| Impact on Future Development: | Future development will have to follow the ordinance’s provisions. | | |
| Climate Change Considerations: | A stronger ordinance may better prepare the Town for more intense and frequent flooding. | | |
| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input checked="" type="checkbox"/> Medium | <input type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Problem persists |
| | Update floodplain management ordinances with each new FIRM update | | Time-consuming and not cost-effective |

Action 2024-Clarkstown-03. Certified Floodplain Manager Training

| | | |
|---|--|--|
| Action Name: | 2024- Clarkstown -03. Certified Floodplain Manager Training | |
| Description of the Problem: | The Town’s floodplain management and ordinance enforcement staff are not Certified Floodplain Managers and flooding is becoming more common and frequent from severe storms and severe winter storms. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | The Town will require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers. The Town will add/train sufficient members of their staff to adequately enforce NFIP regulations/floodplain management ordinances | |
| Lead Agency: | TDEC | |
| Supporting Agencies: | Building Department | |
| Estimated Cost: | Low (< \$10,000) | |
| Potential Funding Sources: | Operating Budget | |
| Implementation Timeline: | Long-term (> 5 years) | |
| Goals Met: | 1, 2, 3, 7 | |
| Benefits: | This action strengthens the Town’s ability to enforce floodplain management practices. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | This action will familiarize the Town staff with updated floodplain management practices which may benefit critical facilities and infrastructure that could be impacted by flooding. N/A | |
| Impact on Capabilities | This action will provide the Town with stronger capabilities to enforce and update its floodplain management regulations. | |
| Impact on Future Development: | N/A | |
| Climate Change Considerations: | Climate change is leading to an increase in frequency and intensity of precipitation events, which leads to an increase in flooding. | |
| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input type="checkbox"/> Medium |
| | | <input checked="" type="checkbox"/> Low |
| Alternatives | Action | Evaluation |
| | No action | Current problem persists |
| | Require staff to take related courses, but not obtain CFM | Not nationally recognized program; potential to gain CRS points |

Action 2024-ChestnutRidge-04. Community Rating System (CRS)

| | | | |
|---|---|--|--|
| Action Name: | 2024- ChestnutRidge-04. Community Rating Systems | | |
| Description of the Problem: | The Town does not participate in CRS and could benefit from the associated incentives for flooding and severe storm events. The Town needs to identify whether or not joining the program will be beneficial to the community and its residents | | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire | |
| Description of the Solution: | The Town will support participation in the NFIP Community Rating System (CRS) program by attending CRS workshop(s) if offered within the county. The Town will join the CRS program if adequate resources to support long term participation can be dedicated. See following related Community Assistance Visit (CAV) initiative. | | |
| Lead Agency: | Floodplain Administrator | | |
| Supporting Agencies: | TDEC | | |
| Estimated Cost: | Low (< \$10,000) | | |
| Potential Funding Sources: | Operating Budget | | |
| Implementation Timeline: | Long-term (> 5 years) | | |
| Goals Met: | 1, 2, 3, 7 | | |
| Benefits: | This action benefits the Town by being able to use CRS incentives and benefits to complete mitigation projects. | | |
| Mitigation Action Type: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP) | |
| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) | |
| Impact on Socially Vulnerable Populations: | N/A | | |
| Impact on Critical Facilities/Lifelines: | CRS activities may better protect critical facilities and lifelines during flood events. | | |
| Impact on Capabilities | Joining CRS may strengthen the Town’s technical knowledge and capability to enforce floodplain management best practices. | | |
| Impact on Future Development: | Future development would have to follow any ordinance revisions that the Town enacts to gain CRS points. | | |
| Climate Change Considerations: | The Town may adopt a stronger ordinance or enact mitigation projects for CRS points that may better prepare the Town for more intense and frequent flooding. | | |
| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input type="checkbox"/> Medium | <input checked="" type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Current problem persists |
| | Develop local initiative to encourage higher standards than the NFIP | | No flood insurance discounts or benefits for property owners |

Action 2024-Clarkstown-05. Document Flood-prone Properties

| | | |
|---|--|--|
| Action Name: | 2024- Clarkstown-05. Document Flood-prone Properties | |
| Description of the Problem: | There are properties in the Town that experience repetitive flood damage from severe storm events. Flood-vulnerable properties place an undue stress on the property owner and Town. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | The Town will work with owners located in and around the floodplain to explore mitigation opportunities for repetitively flooded properties, and if appropriate and feasible, carry out acquisition, relocation, elevation, and flood proofing measures to protect these properties. | |
| Lead Agency: | Floodplain Administrator | |
| Supporting Agencies: | Town Building Department | |
| Estimated Cost: | High (> \$100,000) | |
| Potential Funding Sources: | FEMA (HMGP, FMA, PDM), CDBG, NYS DHSES, Municipal Budget | |
| Implementation Timeline: | Short-term (<5 years) | |
| Goals Met: | 1, 2, 3, 5, 7 | |
| Benefits: | This action will reduce the amount of flood prone properties and will increase outreach amongst the Town. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | This project could make it easier for the County and Town to reach homeowners with vulnerable properties. | |
| Impact on Critical Facilities/Lifelines: | N/A | |
| Impact on Capabilities | Data will help the Town and County design future mitigation actions and outreach to vulnerable residents. | |
| Impact on Future Development: | This project could help reduce potential impact of flooding on nearby future development. | |
| Climate Change Considerations: | This project could help identify potential areas or properties for potential buyouts or floodplain restoration projects. | |
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium |
| | | <input type="checkbox"/> Low |
| Alternatives | Action | Evaluation |
| | No action | Current problem persists |
| | Re-route source of flooding | Not feasible |

Action 2024-Clarkstown-06. Critical Facilities in the Floodplain

| | | |
|---|--|--|
| Action Name: | 2024- Clarkstown -06. Critical Facilities in the Floodplain | |
| Description of the Problem: | There are multiple dams, major employers, daycares, urgent cares, wells, and other critical facilities in the Town that are in the floodplain and potentially vulnerable to flood events and dam failures as identified during the Rockland County HMP update. The Town does not have jurisdiction over all these structures to mitigate. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | The Town will notify the private owners regarding these critical facilities' flood vulnerability identified during the Rockland County HMP update and NYS' requirement to protect to the 500-year flood or worst-case scenario. The Town will provide the owners information regarding grant options for funding to implement their mitigation. The private owners will need to determine the most cost effective and feasible mitigation action for these facilities. | |
| Lead Agency: | Town Engineer, Property Owners | |
| Supporting Agencies: | Building Department | |
| Estimated Cost: | High (> \$100,000) | |
| Potential Funding Sources: | FEMA HMA, FMA, BRIC | |
| Implementation Timeline: | Short-term (< 5 years) | |
| Goals Met: | 1, 2 | |
| Benefits: | This action strengthens the protection of the dam. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | This project aims to ensure the accessibility of roadways during flooding events and ensures access to emergency routes and critical facilities. | |
| Impact on Capabilities: | This action strengthens the Town’s capabilities in protecting critical infrastructure. | |
| Impact on Future Development: | This project can help mitigate potential damage along any affected roadways. | |
| Climate Change Considerations: | Climate change is leading to an increase in frequency and intensity of precipitation events, which leads to an increase in flooding. | |
| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input checked="" type="checkbox"/> Medium |
| | | <input type="checkbox"/> Low |
| Alternatives | Action | Evaluation |
| | No action | Problem persists |
| | Town mitigates only municipal-owned facilities | Does not reduce or eliminate risk for other facilities |
| | Town completes mitigation actions in inundation areas | Does not reduce or eliminate risk |

Action 2024-Clarkstown-07. Routes 59 and 303 Flood Mitigation

| | | | |
|---|---|--|------------------------------|
| Action Name: | 2024-Clarkstown-07. Nauraushaun Stream Flood Mitigation | | |
| Description of the Problem: | Frequency and severity of flooding on Route 59 near Route 303 and the Palisades Mall has increased significantly within recent years as a result of more frequent and intense storm events. The road has been closed due to flooding from severe storm events nine times within the last 12 months. It is a main artery for commercial businesses in the Town and region and for police, fire and EMS and is traveled by 45,000 vehicles daily. The flooding is a result of backwatering of the Hackensack River and tributary NJ1-9-2-4 to the Hackensack. | | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire | |
| Description of the Solution: | The Town has started discussions with the USACE to examine the possibility of dredging the Hackensack River upstream and downstream of Route 59 to remove accumulated sediment from the river and increase flow capacity. Mitigation will reduce frequency of flooding and road closures and will prevent/reduce delays by police, fire and EMS responding to emergency calls in the area. Mitigation will also benefit the 45,000 motorists who travel Route 59 daily. | | |
| Lead Agency: | USACE | | |
| Supporting Agencies: | NYS DEC, NYS DOT, Town | | |
| Estimated Cost: | High (> \$100,000) | | |
| Potential Funding Sources: | FEMA HMA, FMA, BRIC; NYS DOT | | |
| Implementation Timeline: | Long-term (4-5 years) | | |
| Goals Met: | 1, 2, 4, 6 | | |
| Benefits: | This action lessens the closures amongst Route 59 and 303. | | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input checked="" type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) | |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) | |
| Impact on Socially Vulnerable Populations: | N/A | | |
| Impact on Critical Facilities/Lifelines: | Routes 303 and 59 would be less vulnerable to being inundated or damaged by a flood. | | |
| Impact on Capabilities | This action strengthens the Town’s capabilities in protecting critical infrastructure | | |
| Impact on Future Development: | Nearby development would be less vulnerable to flood damage. | | |
| Climate Change Considerations: | The stream may be better able to withstand future and more intense flood events. | | |
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium | <input type="checkbox"/> Low |

| Alternatives | Action | Evaluation |
|--------------|--------------|------------------|
| | No action | Problem persists |
| | Move stream | Not feasible |
| | Move roadway | Not feasible |

Action 2024-Clarkstown-08. West Nyack Road Culvert Replacements

| | | |
|---|--|--|
| Action Name: | 2024-Clarkstown-08. West Nyack Road Culvert Replacements | |
| Description of the Problem: | There are several properties near West Nyack Road and Klein Avenue that experience re-occurring flooding due to undersized culverts and an influx of water from severe storm events. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | The Town will replace two existing undersized under West Nyack Road to reduce likelihood of flooding. | |
| Lead Agency: | DEFM | |
| Supporting Agencies: | - | |
| Estimated Cost: | High (\$750,000) | |
| Potential Funding Sources: | EPA | |
| Implementation Timeline: | Short-term (<1 year) | |
| Goals Met: | 2, 4, 7 | |
| Benefits: | This action lessens the flooding along West Nyack Road and Klein Avenue. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | This project would reduce the vulnerability of West Nyack Road and Klein Avenue being inundated during a flood event. | |
| Impact on Capabilities | This action strengthens the Town’s ability to reduce flooding. | |
| Impact on Future Development: | Future development in this area may be less likely to experience flood damage. | |
| Climate Change Considerations: | The project mitigates flooding conditions resulting from increased frequency and intensity of storm events. | |

| | | | |
|-------------------------------|--|---------------------------------|------------------------------|
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium | <input type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Problem persists |
| | Relocate roadways | | Not feasible |

Action 2024-Clarkstown-09. Jeffrey Court Levee

| | | |
|--|--|--|
| Action Name: | 2024-Clarkstown-09. Jeffrey Court Levee | |
| Description of the Problem: | There is flooding of several properties at Jeffrey Court, along the West Nyack west of the Hackensack River and south of Old Mill Road from severe storm events | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | Construction of a levee between the impacted properties and the Hackensack River to the east. | |
| Lead Agency: | DEFM | |
| Supporting Agencies: | - | |
| Estimated Cost: | High (\$4,000,000) | |
| Potential Funding Sources: | FEMA HMA, FMA, BRIC | |
| Implementation Timeline: | Short-term (3 years) | |
| Goals Met: | 1, 2, | |
| Benefits: | The Town will experience less flooding at Jeffrey Court, along the West Nyack west of the Hackensack River and, south of Old Mill Road. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | N/A | |
| Impact on Capabilities | This will enhance the flood reduction capabilities of the Town. | |
| Impact on Future Development: | The levee could protect future development in the inundation area. | |
| Climate Change Considerations: | Mitigates flooding conditions resulting from increased frequency and intensity of storm events. | |

| | | | |
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| Priority: <i>Check one</i> | <input type="checkbox"/> High | <input checked="" type="checkbox"/> Medium | <input type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Problem persists |
| | Relocate properties | | Not feasible |

Action 2024-Clarkstown-10. Hereford Land Culvert Replacement

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| Action Name: | 2024-Clarkstown-10. Hereford Land Culvert Replacement | |
| Description of the Problem: | Several residential properties near Hereford Lane in West Nyack experience re-occurring flooding due to an undersized culvert that overtops during severe storm events.. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire |
| Description of the Solution: | Replace the existing undersized on Hereford Lane to reduce likelihood of flooding. | |
| Lead Agency: | DEFM | |
| Supporting Agencies: | - | |
| Estimated Cost: | High (\$1,000,000) | |
| Potential Funding Sources: | State | |
| Implementation Timeline: | Short-term (<1 year) | |
| Goals Met: | 2, 4, 7 | |
| Benefits: | This action reduces flooding in the Town. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | N/A | |
| Impact on Critical Facilities/Lifelines: | This project would reduce the vulnerability of West Nyack Road and Klein Avenue being inundated during a flood event. | |
| Impact on Capabilities | This will enhance the flood reduction capabilities of the Town. | |
| Impact on Future Development: | Future development in this area may be less likely to experience flood damage. | |

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| Climate Change Considerations: | The project mitigates flooding conditions resulting from increased frequency and intensity of storm events. | | |
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium | <input type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Problem persists |
| | Relocate roadway | | Not feasible |

Action 2024-Clarkstown-11. Substantial Damage Determination Training and Resources

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| Action Name: | Action 2024-Clarkstown-11. Substantial Damage Determination Training and Resources | |
| Description of the Problem: | The municipality does not have a Substantial Damage Management Ordinance, nor do they have a standard process in place when conducting substantial damage determinations following a dam/levee failure, drought, earthquake, extreme temperature event, flood, landslide, severe storm, severe winter storm, or wildfire. The Town has substantial damage determination provisions in both the adopted NFIP ordinance and adopted building code, but staff are unaware of these provisions and do not leverage them. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire |
| Description of the Solution: | <p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p> <p>The municipality will also take part in workshops and training sessions offered by NYSDEC to train staff on the existing provisions in the NFIP ordinance and building code.</p> | |
| Lead Agency: | Floodplain Administrator | |
| Supporting Agencies: | Building Department, Planning Department, Engineering and Facilities Management Department | |
| Estimated Cost: | Low | |
| Potential Funding Sources: | Municipal budget | |
| Implementation Timeline: | Within 5 years to develop the plan; ongoing to maintain and update the plan | |
| Goals Met: | 2, 5, 7 | |
| Benefits: | This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly. | |
| Mitigation Action Type: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) |

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| CRS Category: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES) |
| Impact on Socially Vulnerable Populations: | Substantially damaged structures are required to be rebuilt to be compliance with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations. | |
| Impact on Critical Facilities/Lifelines: | A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality. | |
| Impact on Capabilities: | This action improves disaster recovery capabilities. | |
| Impact on Future Development: | A Substantial Damage Management Plan would include all existing, current, and future development in the municipality. | |
| Climate Change Considerations: | Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery. | |
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium <input type="checkbox"/> Low |
| Alternatives | Action | Evaluation |
| | No Action | No change |
| | Rely on state or federal resources following disaster events | Resources may not be available during major widespread events |
| | Establish MOUs with outside agencies to conduct Substantial Damage Determinations | A plan outlining responsibilities is still necessary to prevent missing important requirements |

Action 2024-ClarkstownT-12. Socially Vulnerable Populations Outreach

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| Action Name: | 2024- ClarkstownT-12. Socially Vulnerable Populations Outreach | |
| Description of the Problem: | The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. During hazard events, the public may need to quickly access information about evacuation routes and shelters, or other steps they can take to protect themselves and their property. Residents may also need information about what services are available or offline due to flooding from intense precipitation, dam failure, severe storms, and snow melt; where to receive a vaccination or other healthcare in the event of a disease outbreak; public cooling or heat centers, such as libraries, during extreme temperatures; and evacuation areas for earthquakes, landslides, and wildfires. Socially vulnerable and underserved populations may rely on these types of services more heavily than other segments on the population. Furthermore, they may be less able to access these resources due to a variety of potential obstacles, such as mobility issues or language barriers. | |
| Hazard(s) of Concern: <i>Check all that apply</i> | <input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature | <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire |
| Description of the Solution: | Create outreach materials, or utilize those from Rockland County, on hazard risks for socially vulnerable populations. Methods of distribution may include Town events, the Town newsletters, social media, the Town website, and having the materials on display for the public at Town libraries and offices. | |
| Lead Agency: | Town Administration | |

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| Supporting Agencies: | Rockland County | | |
| Estimated Cost: | Low | | |
| Potential Funding Sources: | Town Budget, HMGP | | |
| Implementation Timeline: | Within 3 years | | |
| Goals Met: | 1, 3, 5 | | |
| Benefits: | This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks. | | |
| Mitigation Action Type: <i>Check all that apply</i> | <input type="checkbox"/> Local Plans and Regulations (LPR) | <input type="checkbox"/> Natural Systems Protection (NSP) | |
| | <input type="checkbox"/> Structure and Infrastructure Project (SIP) | <input checked="" type="checkbox"/> Education and Awareness Programs (EAP) | |
| CRS Category: <i>Check all that apply</i> | <input type="checkbox"/> Preventative Measures (PR) | <input type="checkbox"/> Natural Resource Protection (NR) | |
| | <input type="checkbox"/> Property Protection (PP) | <input type="checkbox"/> Structural Flood Control Projects (SP) | |
| | <input checked="" type="checkbox"/> Public Information (PI) | <input type="checkbox"/> Emergency Services (ES) | |
| Impact on Socially Vulnerable Populations: | Socially vulnerable populations in the Town will become educated on hazards risks. The Town will identify an individual to identify and work with these populations to ensure the most up to date information is being shared. | | |
| Impact on Critical Facilities/Lifelines: | Educating populations on hazard risk and how to mitigate the risks can decrease the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue. | | |
| Impact on Capabilities | This action would build upon the Town’s already existing public education and outreach program. | | |
| Impact on Future Development: | Not applicable | | |
| Climate Change Considerations: | Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action will inform residents and business owners of how to reduce risk from hazards and how climate change may exacerbate those risks. | | |
| Priority: <i>Check one</i> | <input checked="" type="checkbox"/> High | <input type="checkbox"/> Medium | <input type="checkbox"/> Low |
| Alternatives | Action | | Evaluation |
| | No action | | Current methods remain the only ones used |
| | Rely on state or federal resources | | Resources may be generalized and not specific to the risks in the Town |
| | Use only a few methods for distribution | | Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance |