



9.21 TOWN OF SHANDAKEN

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

9.21.1 Hazard Mitigation Planning Team

The Town of Shandaken identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many Town departments, including the Town Administration. The Town Supervisor represented the community on the Ulster County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Volume 1, Section 3 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.21-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Peter DiSclifani, Supervisor Address: 7209 Rte 28, Shandaken, NY 12480 Phone Number: (845) 688-7165 Email: supervisorshandaken@gmail.com	Name/Title: Eric Hofmeister, Highway Superintendent Address: 7209 Rte 28, Shandaken, NY 12480 Phone Number: 845-688-5031 Email: shandakenhighway@gmail.com
NFIP Floodplain Administrator	
Name/Title: Peter DiSclifani, Supervisor Address: 7209 Rte 28, Shandaken, NY 12480 Phone Number: (845) 688-7165 Email: supervisorshandaken@gmail.com	
Additional Contributors	
No Additional Contributors	

9.21.2 Municipal Profile

The Town of Shandaken is located within the Catskill Park in the northwestern portion of Ulster County. The Town consists of 119.8 square miles, 119.7 of which are land and 0.1 of which are water. Shandaken is a Catskill vacation destination featuring hiking and bicycling trails, skiing, camping, fishing, hunting, and kayaking. The local Belleayre Mountain ski resort is home to the Catskill Thunder, the only gondola in the Catskill region. Shandaken was established as a town in 1804 from part of the Town of Woodstock. Much of the land in Shandaken is New York State land. Many of Shandaken’s hamlets are situated at the base of Slide Mountain, the highest peak in the Catskill Mountains.



According to the U.S. Census, the 2020 population for the Town of Shandaken was 2,866, a 9.5 percent decrease from the 2010 Census (3,168). Data from the 2020 American Community Survey 5-year Estimates indicate that 2.2 percent of the population is 5 years of age or younger, 30.6 percent is 65 years of age or older, 24.6 percent have disabilities, and 14.0 percent are below the poverty threshold. 0.0 percent of households are non-English speaking. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.21.3 Jurisdictional Capability Assessment and Integration

The Town of Shandaken performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 6 (Mitigation Strategy) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following types of municipal capabilities:

- Planning, legal, 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 the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Town of Shandaken to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. The table below summarizes the regulatory tools that are available to the Town of Shandaken. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.21-2. Planning, Legal, and Regulatory Capability and Integration

	Is this plan/policy in place? (Yes/No)	Citation and Effective Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>Codes, Ordinances, & Regulations</i>				
Building Code	Yes	Chapter 74, Adopted April 7, 2008	State and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town follows state building code and Fire Code so that Government operations and properties are maintained in a safe and healthful manner; that all operations observe federal, state and county regulations and mandates; and to facilitate this adherence through inspection, education, training, and example. Programs and services are limited to the County Government infrastructure.				



	Is this plan/policy in place? (Yes/No)	Citation and Effective Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Zoning/Land Use Code	Yes	Chapter 116, Adopted December 9, 1987	Local	Zoning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The focus of the Code is to guide the future growth and development of the town in accordance with a comprehensive plan of land use and population density that represents and promotes beneficial and convenient relationships among residential, commercial and public areas within the town, considering the suitability of each area for such uses, as indicated by existing conditions, trends in population and mode of living, hazard areas and having regard for the use of land, building development and economic activity both within and adjacent to the town.</p>				
Subdivision Ordinance	Yes	Chapter 105, Adopted December 11, 1971	Local	Zoning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Land is to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood or other menace; that proper provision shall be made for drainage; water supply, sewerage and other needed improvements; that natural terrain, vegetation and soil shall be conserved wherever possible; that all proposed lots shall be so laid out and of such size as to be in harmony with the development pattern of the neighboring properties; that the proposed streets shall compose a convenient system conforming to the Official Map.</p>				
Site Plan Ordinance	Yes	Chapter 116, Adopted June 11, 1997	Local and County	Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Prior to issuing any subdivision approval and/or site plan approval to a parcel within the district and/or prior to issuing a building permit to a parcel within the district, the development of which, in accordance with the approval, would result in a sewage discharge or an increase in sewage discharge requiring state, Ulster County Health Department, or NYCDEP approval, the Planning Board and/or the Code Enforcement Officer shall refer the applicant/property owner to the Town Board and appropriate agencies for approval in accordance with this article.</p>				
Stormwater Management Ordinance	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Post-Disaster Recovery/ Reconstruction Ordinance	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.</p>				
Growth Management	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Environmental Protection Ordinances	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Flood Damage Prevention Ordinance	Yes	Chapter 77, Adopted October 3, 2016	Federal, State, County and Local	
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Town Board of the Town of Shandaken finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Town of Shandaken and that such damages may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life.</p>				
Wellhead Protection or Water Restrictions	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				



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	Is this plan/policy in place? (Yes/No)	Citation and Effective Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	Yes	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Special Purposes Ordinance				
Planning Documents				
Comprehensive / Master Plan	Yes	Comprehensive Plan for the Town of Shandaken, NY; July 11, 2005	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> New York State Town Law (§272-a) authorizes preparation of a master (or comprehensive) plan by a town and sets forth the procedures to be followed. The law includes a statement of "legislative findings and intent" that emphasizes the importance of the planning process to the health, safety, and general welfare of town residents and the essential need for open citizen participation in the design of the comprehensive plan.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



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	Is this plan/policy in place? (Yes/No)	Citation and Effective Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Transportation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Agriculture Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Action/ Resiliency/ Sustainability Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other (for example NYRCR, etc.)	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Response/Recovery Planning				
Comprehensive Emergency Management / Emergency Operations Plan	Yes	Ulster County Comprehensive Emergency Management Plan (June 17, 2014)	County	Ulster County Division of Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk?				
The Plan serves as an operational guide setting a course of actions during a declared emergency minimizing hazards to life and property.				
Continuity of Operations Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Substantial Damage Response Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Public Health Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	Yes	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Evacuation Plan				



Development and Permitting Capability

The table below summarizes the capabilities of the Town of Shandaken to oversee and track development.

Table 9.21-3. 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?	Yes	The Building Department is responsible for the issuance of permits.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain development permits are tracked.
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

Administrative and technical capabilities include boards, commissions, departments, staff and consulting services, along with the related skills and tools, that can be used for mitigation planning and the implementation of specific mitigation actions. The table below summarizes potential staff and personnel resources available to the Town of Shandaken and their current responsibilities that contribute to hazard mitigation.

Table 9.21-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, how its related to hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board consists of 7 Volunteer Members, each with staggered 7-year terms. They are responsible for hearing cases regarding Special Use Permits, Site Plan Review, Lot Line Adjustments, Subdivisions; and then making determinations on whether they should be granted.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals consists of 5 Volunteer Members, each with staggered 5-year terms. They are responsible for hearing cases regarding Area Variances, Use Variances, Interpretations and then making determinations on whether they should be granted.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The parks and recreation board helps preserve, promote, maintain, and expand the recreational offerings of the Town of Shandaken.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Responsibilities include maintaining all town roads and bridges and snow removal on town roads.
Construction/Building/Code Enforcement Department	Yes	The duties of the Code Enforcement Officer include the making of inspections to determine conformance with applicable chapters and laws, the undertaking of systematic inspection programs, the undertaking of research and



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, how its related to hazard mitigation)
		investigations, the keeping of records, the issuance of violation notices and such other activities as may be required.
Emergency Management/Public Safety Department	Yes	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	No	-
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	No additional details at this time
Engineers or professionals trained in building or infrastructure construction practices	Yes	No additional details at this time
Planners or engineers with an understanding of natural hazards	Yes	No additional details at this time
Staff with expertise or training in benefit/cost analysis	Yes	No additional details at this time
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	No additional details at this time
Environmental scientist familiar with natural hazards	Yes	No additional details at this time
Surveyor(s)	No	-
Grant writer(s)	Yes	No additional details at this time
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Floodplain Manager

Fiscal Capability

Fiscal capabilities include access to or eligibility to use funding resources for hazard mitigation. The table below summarizes financial resources available to the Town of Shandaken.

Table 9.21-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)	Comments (relation to hazard mitigation)
Community development Block Grants (CDBG, CDBG-DR)	Yes	No additional details at this time
Capital improvements project funding	Yes	No additional details at this time
Authority to levy taxes for specific purposes	Yes	No additional details at this time
User fees for water, sewer, gas or electric service	Yes	No additional details at this time
Impact fees for homebuyers or developers of new development/homes	Yes	No additional details at this time
Stormwater utility fee	No	-
Incur debt through general obligation bonds	Yes	No additional details at this time
Incur debt through special tax bonds	Yes	No additional details at this time
Incur debt through private activity bonds	Yes	No additional details at this time



Financial Resources	Accessible or Eligible to Use? (Yes/No)	Comments (relation to hazard mitigation)
Withhold public expenditures in hazard-prone areas	Yes	No additional details at this time
Other federal or state Funding Programs	No	-
Open Space Acquisition funding programs	No	-
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes	No additional details at this time

Education and Outreach Capability

Education and outreach capabilities include programs and methods already in place that could be used to support implementation of mitigation actions and communicate hazard-related information.

Table 9.21-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	No	-
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	There is a link for Town news and updates as well as a location to sign up for emergency alert notifications
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	Link for flood mitigation.
Social media for hazard mitigation education and outreach	Yes	Located on website
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Planning/zoning
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? <ul style="list-style-type: none">If yes, please describe.	Yes	Town has a disaster prep link on their website.

Community Classifications

The table below summarizes classifications for community programs available to the Town of Shandaken.

Table 9.21-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	Class 8	October 1, 2021
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	Registered	October 2, 2016
StormReady Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-



Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’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 9.21-8. Adaptive Capacity

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Dam Failure	Moderate
Drought	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Hazardous Materials	Moderate
Landslide	Moderate
Pandemic	Moderate
Severe Storm	Strong
Severe Winter Storm	Strong
Utility Failure	Moderate
Wildfire	Moderate

9.21.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

NFIP Statistics

The following table summarizes the NFIP statistics for the Town of Shandaken.

Table 9.21-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Shandaken	177	263	\$5,748,174.65	3	38	6

Source: FEMA 2023

Notes:

RL Repetitive Loss

SRL Severe Repetitive Loss

- RL FMA Definition - Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.



- *RL NFIP Definition - Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.*

Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Town of Shandaken.

Table 9.21-10. NFIP Compliance in the Jurisdiction

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none">• Do you maintain a list of properties that have been damaged by flooding?	Yes, Near mountain creeks and streams.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none">• How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Yes, the amount changes, between 1-12
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none">• If so, state what projects are underway.	No, maps have been made.
How do you make Substantial Damage determinations? <ul style="list-style-type: none">• How many were declared for recent flood events in your jurisdiction?	A percentage of what should have been full market value.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none">• If there are mitigation properties, how were the projects funded?	12, through Catskill Watershed Corporation and NYCDEP
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?	Building Department.
Are any certified floodplain managers on staff in your jurisdiction?	Yes.
Do you have access to resources to determine possible future flooding conditions from climate change?	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?	Yes, through County and State agencies.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	We send out letters of education and invitation to properties in SFHA
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	By Full market Value, anything over 50% of FMV.
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.	Not currently.



NFIP Topic	Comments
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown
What is the local law number or municipal code of your flood damage prevention ordinance? <ul style="list-style-type: none"> What is the date that your flood damage prevention ordinance was last amended? 	LL#1 of 2016
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Yes, it meets the 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?	Yes, Chapter 116 addresses flood hazard zones and discusses overlay districts.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Yes, joined in 2021

9.21.5 Growth and 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. Table 9.21-11 and Table 9.21-12 summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.21-11. Building Permits Issued for New Construction, 2017 to 2022

Type of Development	2017		2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	0	0	0	0	0	0	2	0	4	0	3	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Total New Construction Permits Issued	0	0	0	0	0	0	2	0	4	0	3	0

SFHA = Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

Table 9.21-12. Recent and Expected Future Development

Property or Development Name	Type	Location (address and/or block and lot)	Known Hazard Area(s)	Description/ Status of Development
Recent Major Development and Infrastructure from 2017 to Present				
None Identified				
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years				



Property or Development Name	Type	Location (address and/or block and lot)	Known Hazard Area(s)	Description/ Status of Development
Crossroad Ventures	Commercial	-	Wildfire Interface and Intermix, 100- and 500-year floodplain, Hazmat Road buffer, Steep Slope	Approved
Firelight	Commercial	-	Wildfire Interface and Intermix, 100- and 500-year floodplain, Hazmat Road buffer, Steep Slope	Approved

9.21.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 5 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 5.1 (Methodology and Tools) and Section 5.3 (Hazard Ranking) provide detailed summaries for the Town of Shandaken's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Only maps for those hazards that can be identified clearly using mapping techniques and technologies and for which the Town of Shandaken has significant exposure are provided. The maps show the location of potential new development, where available.



Figure 9.21-1. Town of Shandaken Dam Inundation and Flood Hazard Area Extent and Location Map

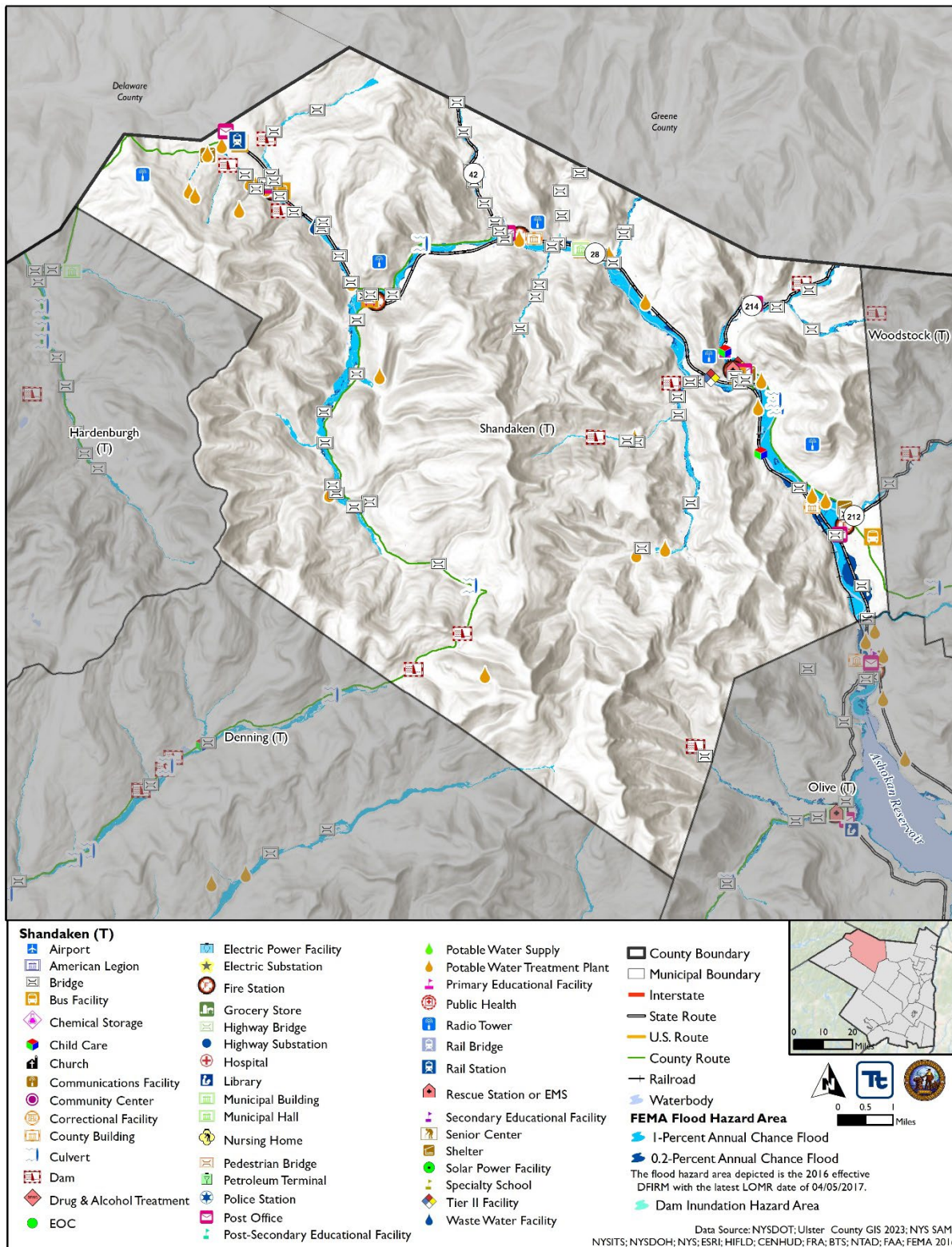




Figure 9.21-2. Town of Shandaken Hazardous Materials Hazard Area Extent and Location Map

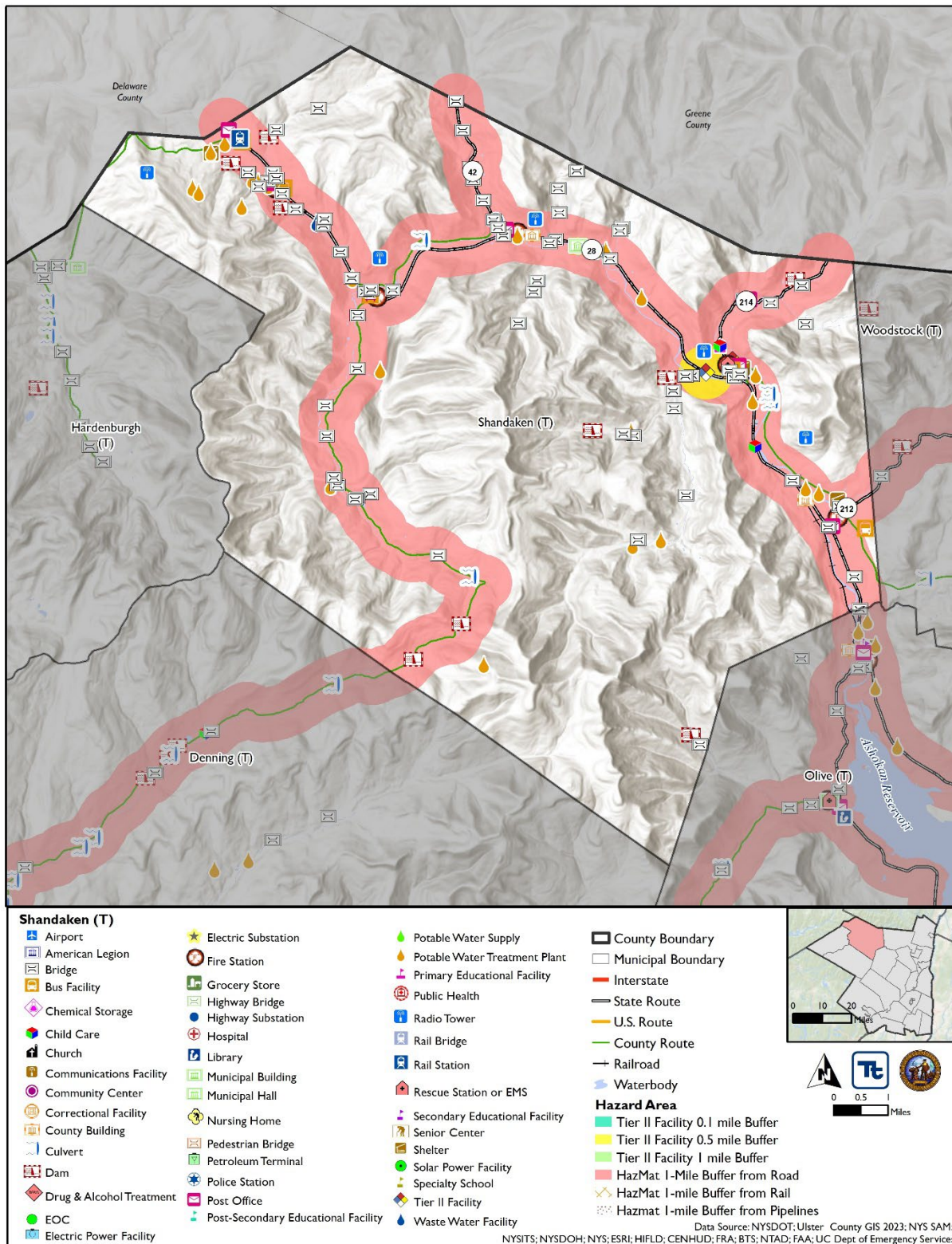




Figure 9.21-3. Town of Shandaken Surges and Seal Level Rise Hazard Area Extent and Location Map

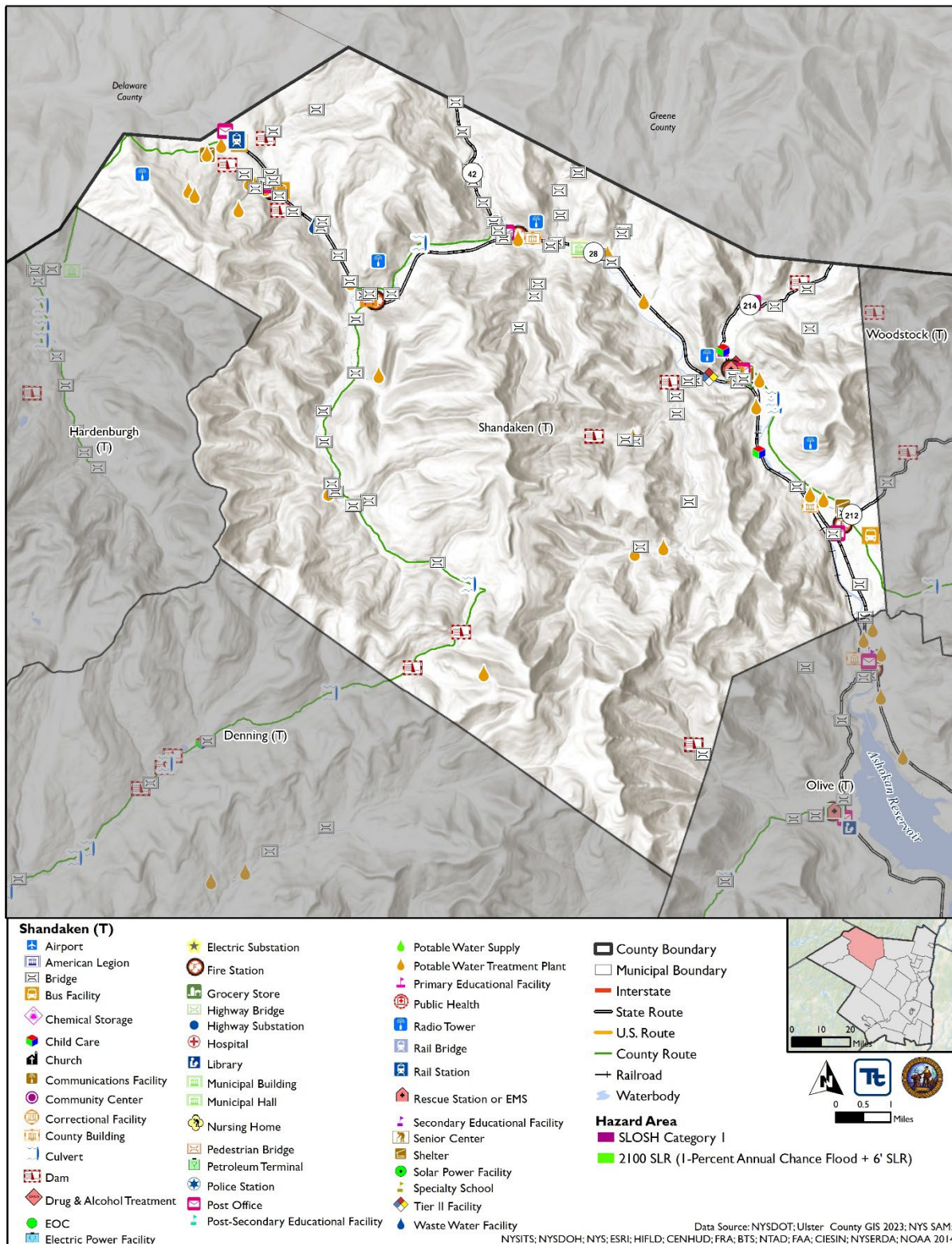
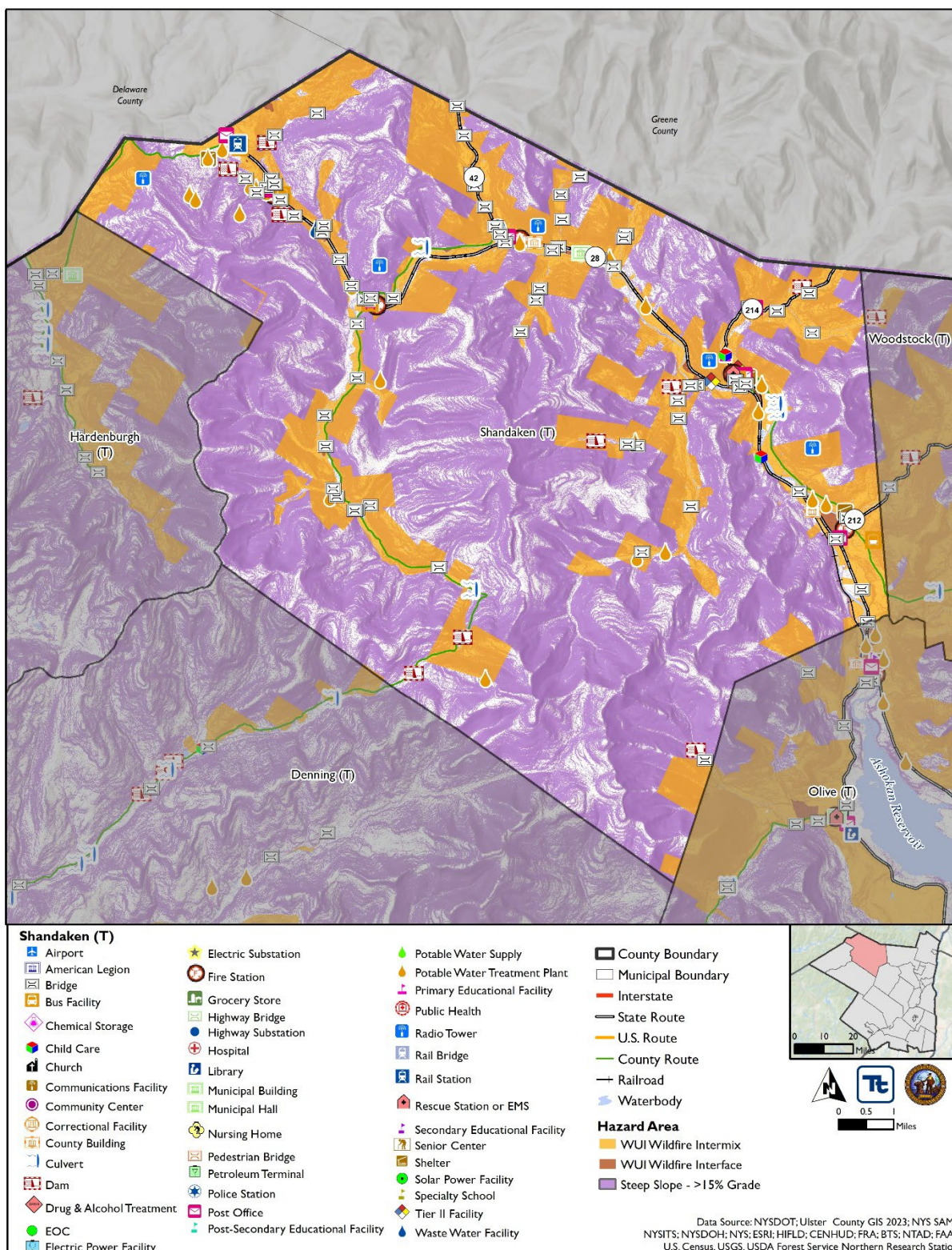




Figure 9.21-4. Town of Shandaken Steep Slope and Wildfire Hazard Area Extent and Location Map





Hazard Event History

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

The Town of Shandaken's history of federally declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. Table 9.21-13 provides details regarding municipal-specific loss and damages the Town experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources. Refer to Section 5.4 (Hazard Profiles) for details on hazard events.

Table 9.21-13. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January 10, 2017	Strong Wind	No	A cold front moved through Ulster County bringing strong, gusty winds to the area. Wind speeds ranged from 40 to 60 mph.	Roadway partially washed-out
March 14-16, 2017	Severe Winter Storm (DR-4322)	Yes	A coastal storm impacted the region from March 14 th through the 16 th , bringing heavy snowfall and blizzard conditions. A state of emergency was declared for New York State and truck bans were implemented for area interstates.	The Town did not experience additional losses and damages that were not listed in the summary of event.
August 18, 2018	Flash Flood	No	A line of showers and thunderstorms brought heavy rainfall and led to flash flooding in Ulster County. Damages included flooded roadways, downed trees, and utility line damages.	The Town did not experience additional losses and damages that were not listed in the summary of event.
January 20, 2020 – Present	Covid-19 Pandemic (DR-4480) (EM-3434)	Yes	Between March 1, 2020 and February 3, 2023, Ulster County reported 54,783 confirmed cases of COVID-19, and 414 total fatalities.	The Town did not experience additional losses and damages that were not listed in the summary of event.
December 24-25, 2020	Flood	No	Heavy rain fell over the area during Christmas, causing flooding across Ulster County.	The Town did not experience additional losses and damages that were not listed in the summary of event.
March 12-13, 2021	Strong Winds	No	Strong winds impacted Ulster County, with gusts of up to 55 mph. This led to downed trees and power lines, damaging vehicles and trees.	The Town did not experience additional losses and damages that were not listed in the summary of event.
June 8, 2021	Lightning	No	Showers and thunderstorms impacted Ulster County, bringing between 1.5 and 2.5 inches of rain. Lightning struck a home in Ulster County, causing a fire.	The Town did not experience additional losses and damages that were not listed in the summary of event.
September 1-3, 2021	Hurricane Ida (EM-3572) (DR-4615)	Yes	Hurricane Ida made its way up the east coast, through New York City and up through Ulster County. The county	Hurricane Ida made its way up the east coast, through New York City and up



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			experienced heavy rainfall which left many streets, fields and farms flooded.	through Ulster County. The county experienced heavy rainfall which left many streets, fields and farms flooded.
April 7-8, 2022	Flood	No	<p>Heavy rain and widespread flooding hit eastern New York State, bringing rainfall totals of up to 4.5 inches. This heavy rainfall led to over a dozen rivers to exceed minor flood stage with a few rivers reaching moderate flood stage.</p> <p>Numerous roads were closed throughout Ulster County, some of which occurred in Marbletown, Kingston, Saugerties, Stone Ridge, Rosendale, Gardiner, Wawarsing and New Paltz. Basement flooding was also reported in Stone Ridge. Property damage totaled \$50,000.</p>	The Town did not experience additional losses and damages that were not listed in the summary of event.
July 13, 2022	Tornado	No	<p>A supercell thunderstorm resulted in multiple severe wind damage reports over Ulster and Dutchess Counties during the evening of Wednesday July 13, 2022. Additionally, the supercell resulted in a tornado and macroburst in Ulster County near Kingston, NY.</p> <p>In Ulster County, the tornado moved southeast to just west of the NY State Thruway crossing a subdivision where it uprooted and snapped trees, displaced a car canopy and removed some shingles from a house. Many homes were damaged by fallen trees. Aerial photos showed a swath of downed trees from a second vortex which moved along the northeast edge of the subdivision. Property damage totaled \$28,000.</p>	The tornado moved southeast to just west of the NY State Thruway crossing a subdivision where it uprooted and snapped trees, displaced a car canopy, and removed some shingles from a house. Many homes were damaged by fallen trees. Aerial photos showed a swath of downed trees from a second vortex which moved along the northeast edge of the subdivision. Property damage totaled \$28,000.

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 5 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Town of Shandaken's risk assessment results and data used to determine the hazard ranking.

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 5



(Risk Assessment). 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; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 5.3 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Town of Shandaken. The Town of Shandaken reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

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

- The Town changed the utility failure hazard ranking from low to medium due to numerous incidents of trees falling and interrupting utilities.
- The Town changed the drought ranking from low to medium due to climate change.
- The Town changed the wildfire ranking from low to medium due to climate change.
- The Town changed the extreme temperature ranking from low to medium due to climate change.

Table 9.21-14. Hazard Ranking Input

Hazard	Ranking
Dam Failure	Low
Drought	Medium
Extreme Temperature	Medium
Flood	High
Hazardous Materials	Low
Landslide	Low
Pandemic	Low
Severe Storm	High
Severe Winter Storm	High
Utility Failure	Medium
Wildfire	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

Critical Facilities

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



The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus-MH estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.21-15. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bus Facility	Bus Facility	X	X	2024-Town of Shandaken-018	-
Bus Facility	Bus Facility	-	X	2024-Town of Shandaken-018	-
Chichester Post Office	Post Office	-	X	2024-Town of Shandaken-018	-
HEALTHY KIDS EXTENDED DAY PROGRAM	Childcare	-	X	2024-Town of Shandaken-018	-
Highway Substation	Highway Substation	-	X	2024-Town of Shandaken-018	-
Highway Substation - Shandaken	County Building	-	X	2024-Town of Shandaken-018	-
MF Whitney Hose Co	Fire Station	X	X	2024-Town of Shandaken-018	-
Mount Tremper Post Office	Post Office	X	X	2024-Town of Shandaken-018	-
NY5503380	Potable Water Treatment Plant	X	X	2024-Town of Shandaken-018	-
NY5503380	Potable Water Treatment Plant	X	X	2024-Town of Shandaken-018	-
NY5505607	Potable Water Treatment Plant	X	X	2024-Town of Shandaken-018	-
NY5507081	Potable Water Treatment Plant	-	X	2024-Town of Shandaken-018	-
NY5507211	Potable Water Treatment Plant	-	X	2024-Town of Shandaken-018	-
NY5507211	Potable Water Treatment Plant	-	X	2024-Town of Shandaken-018	-
NY5507211	Potable Water Treatment Plant	X	X	2024-Town of Shandaken-018	-
NY5507211	Potable Water Treatment Plant	-	X	2024-Town of Shandaken-018	-
NY5515062	Potable Water Treatment Plant	X	X	2024-Town of Shandaken-018	-
Phoenicia - St. Francis de Sales Parish *	Shelter	-	X	2024-Town of Shandaken-018	-
PHOENICIA ELEMENTARY SCHOOL	Primary Educational Facility	-	X	2024-Town of Shandaken-018	-
PHOENICIA LIBRARY	Library	X	X	2024-Town of Shandaken-018	-
Phoenicia Post Office	Post Office	-	X	2024-Town of Shandaken-018	-
PINE HILL WWTP	Waste Water Facility	-	X	2024-Town of Shandaken-018	-
Shandaken Police Station	Police Station	X	X	2024-Town of Shandaken-018	-
Shandaken EMS	Rescue Station or EMS	X	X	2024-Town of Shandaken-018	-



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Shandaken Post Office	Post Office	X	X	2024-Town of Shandaken-018	-
Shandaken Town Hall	Municipal Hall	X	X	2024-Town of Shandaken-018	-
Sheriff's Substation - Shandaken	County Building	X	X	2024-Town of Shandaken-018	-
Ulster County Sheriff Sub Station	Police Station	Y	Y	2024-Town of Shandaken-018	-
Verizon CO (VZ- NY58027)	Tier II Facility	-	Y	2024-Town of Shandaken-018	-

Source: Ulster County, GIS 2023

Identified Issues

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

- The Town does not have a continuity of operations plan in place that addresses the hazards of concern laid out in the hazard mitigation plan.
- There are multiple critical Town facilities including the Town garage, Town Hall, Ambulance Housing and Fire Stations that are located in or adjacent to the floodplain which limits access and operation during and after emergency response. These structures are located in the 100-year flood level and must be protected to the 500-year flood level.
- The municipal water supply system is inundated and incapacitated during moderate precipitation events due to damaged and undersized infrastructure which limits and prevents some residents from securing clean water.
- The Bridge Street Bridge is an undersized bridge that has been damaged numerous times, and it provides crucial ingress and egress from the hamlet of Phoenicia. The Bridge is currently creating a backwater effect.
- The County owned bridges cause significant backwatering effect during 50-year storms that inundate Miller Road which is a dead-end road that provides access to 20 homes and NYS Route 42.
- The County owned bridge is significantly undersized and is subject to repetitive erosion and is located at the base of a dead-end Town Road which provides access to nearly 40 homes.
- In the hamlet of Pine Hill, there is an existing reservoir which needs rehabilitation. This holding tank sits on SBL: 4.45-1-17, which is presently owned by Ulster County. At the time of use, it fed a waterline accessed 75 Bonnie View Ave (SBL: 4.45-1-4.100), a property owned by Town of Shandaken, however, is no longer in use. The Fire Department would be able to use this reservoir as an emergency water source.
- The Town experiences issues with Pinehill Stormwater drainage which is dated and cannot keep up with the increasing amount of precipitation and stormwater that is being produced which had led to increased flooding.
- The Town experiences a loss of electricity during extreme weather events which prevents continuity of operations at critical facilities.
- The Town needs a better form of data acquisition to better determine actual risk from flooding.



- The Town is in need of GIS training and digital upgrades to allow the building department to implement modern technology in evaluating hazard areas in determining risks to structures and property locations.
- The Town Flood Hazard Mitigation Plan and County All-hazard mitigation plan are not linked which makes it difficult for the Town and County to coordinate mitigation efforts that involve both entities.
- The Town does not have access to real-time data in reference to flooding which could help guide the Town in crucial decision making. This would include notifying emergency responders of potentially flooded roads so that they can navigate different routes.
- A section of Ulster County Route 47, downstream of McKenley Hollow, and surrounding homes are very vulnerable to moderate storms and have been inundated by flooding on several occasions. This road is a critical road for access to several businesses as well as a YMCA camp.
- The Town experiences poor cell services in areas which makes it hard to communicate and receive emergency notifications when the power is out. This also inhibits communication between municipalities, the County and with residents.
- The Town experiences limited communication capabilities throughout the County which inhibits emergency response capabilities as well as communication between various departments in the Town and neighboring jurisdictions.
- The Town has 38 repetitive loss and six severe repetitive loss properties. Some structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage. Progress has been made on elevating buildings and reconstructing new buildings that are more resistant to flooding.
- The following critical facilities are municipally owned and located in the special flood hazard area:
 - Bus Facility
 - Bus Facility
 - Chichester Post Office
 - HEALTHY KIDS EXTENDED DAY PROGRAM
 - Highway Substation
 - Highway Substation - Shandaken
 - MF Whitney Hose Co
 - Mount Tremper Post Office
 - Potable Water Treatment Plant: NY5503380
 - Potable Water Treatment Plant: NY5503380
 - Potable Water Treatment Plant: NY5505607
 - Potable Water Treatment Plant: NY5507081
 - Potable Water Treatment Plant: NY5507211
 - Potable Water Treatment Plant: NY5507211
 - Potable Water Treatment Plant: NY5507211
 - Potable Water Treatment Plant: NY5507211
 - Potable Water Treatment Plant: NY5515062
 - Phoenicia - St. Francis de Sales Parish *
 - Phoenicia Elementary School
 - Phoenicia Library
 - Phoenicia Post Office
 - Pine Hill WWTP
 - Shandaken Police Station



- Shandaken EMS
- Shandaken Post Office
- Shandaken Town Hall
- Sheriff's Substation - Shandaken
- Ulster County Sheriff Sub Station
- Verizon CO (VZ- NY58027)
- AWSMP has conducted culvert assessments and Local Flood Analysis' to monitor the status of culverts in the watershed area and the Town needs to continue to develop and add to this inventory to limit their losses to flooding.
- The Town does not have an updated and adopted Town-wide Flood Response Plan that addresses Flood concerns that the Town currently has.
- The Town does not currently have a strong, integrated emphasis on stream corridor management in the municipal comprehensive plan, site plan review laws, zoning, and local ordinances.
- The Town does not currently have a dedicated phone line for Town emergency management communications which hinders the speed of emergency communication.
- The Town does not have call in capabilities to Birch Creek, Stony Clove, Woodland Valley, Allaben, and any newly established USGS gages.
- The Town has installed a weather station at Town Hall and needs additional weather stations throughout the Town to ensure safety of all Town residents.
- The Town does not conduct an annual inventory of emergency equipment to ensure that continuity of operations and emergency services can be conducted in a timely fashion.
- There currently are no active plans for Town sheltered animals in the event of an emergency.
- The Town does not currently have a strategy for emergency parking to prevent storm isolation.
- The Town does not maintain a priority list of emergency evacuation areas, nor do they have an action procedure laid out for the Town.
- The Town has repetitive and severe repetitive loss properties that may be interested in having their property acquired or elevated through grant funding so that they do not have to constantly have their properties flooded.
- The Town is unaware of where their repetitive loss structures are located, and therefore cannot make accurate outreach to property owners regarding possible grant funding.
- The Town currently has abandoned and vacant structures that are subject to helping wildfire spread and creating flood debris.
- The Town does not distribute floodplain best management practices to their residents, therefore sometimes they are unaware of problems that arise with the flooding.
- Some Town buildings do not have backup generators or flood mitigation and cannot perform continuity of operations during flooding and power outages.
- The Town has been experiencing issues relating to numerous bridge replacements which cause some crossings to be closed for an extended period of time, which also can impact emergency response time.
- The Town does not track high water marks after flooding events to maintain a database that can be used to prepare the Town for future flooding events.
- The Town is unsure if Fox Hollow bridge over Esopus Creek, a County owned Bridge, and a Town owned bridge over Fox Hollow Creek are adequately sized and wants to ensure that it does when it is scheduled for replacement.



- The flood control levee that currently lines the left bank of Bushnellsville Creek and Esopus Creek confluence, has experienced erosion at the downstream end.
- The Town does not have effective signage and road closure barriers to reduce risks associated with flooding by temporarily closing floodprone Town roads during flooding events.
- The Town experiences flood issues in Mt. Tremper along the Esopus Creek and is in need of floodplain enhancements.
- The Town has fuel oil and propane tanks that are not secured and subject to leaks and pollution.
- Crystal Spring Bridge, a County-owned bridge located on Bonnie View Drive, is currently failing, and experiencing overtopping which prevents access to a Town critical water treatment facility.
- Alton Creek floods and impacts Bonnie View Avenue at Station Road and Mill Street which floods structures that are nearby. Numerous road crossings are overtopped at the 10-year flood due to entrenched and undersized channels. One of the structures that is impacted is a water treatment facility.
- The Town experiences flooding along streets and structures that are located along Birch Creek and has done LFA to detail specific problem areas related to the creek, which impact 11-15 homes and 1 business.
- Farmers in the Town and County are unaware of how crop loss insurance works to protect them against the loss of crops due to natural disasters.

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

9.21.7 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

The following table indicates progress on the community's mitigation strategy identified in the 2018 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



Table 9.21-16. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		<ol style="list-style-type: none"> Next Steps Project to be included in 2024 HMP or Discontinue If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why.
						Cost		
1	Relocation of Town garage and Town Hall above floodplain	Flood	There are multiple critical Town facilities including the Town garage and Town Hall that are located in or adjacent to the floodplain which limits access and operation during and after emergency response. These structures are located in the 100-year flood level and must be protected to the 500-year flood level	Town	Ongoing Capability	Level of Protection	-	<ol style="list-style-type: none"> Include in the 2024 HMP Include Town garage, Town Hall, Ambulance Housing and Fire Stations -
						Damages Avoided; Evidence of Success	-	
2	Repair retaining wall on Woodland Valley, 3 places	Flood	The retaining wall has been damaged and eroded by floodwaters and must be repaired for structural stability.	Highway Department	Complete	Cost	-	<ol style="list-style-type: none"> Discontinue - Project completed
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
3	Repair retaining wall on Miller Road	Flood	The retaining wall has been damaged and eroded by floodwaters and must be repaired for structural stability.	Highway Department	Complete	Cost	-	<ol style="list-style-type: none"> Discontinue - Project completed
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
4	Flood control wall on Brown Road	Flood	Floodwaters impact Brown Road and make unsafe conditions. Construct a flood control wall on Brown Road.	Highway Department	No Progress	Cost	-	<ol style="list-style-type: none"> Discontinue - Project was removed due to other priorities.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
5	Flood control for Hamlet of Phoenicia	Flood		Highway Department	Ongoing Capability	Cost	-	<ol style="list-style-type: none"> Include in the 2024 HMP - -
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		1. Next Steps Project to be included in 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.
						Evidence of Success		
6	Replaced Peck Hollow Bridge	Flood	The Peck Hollow Bridge is an undersized bridge that has been damaged numerous times.	Highway Department	Complete	Cost	-	1. Discontinue
						Level of Protection	-	2. -
						Damages Avoided; Evidence of Success	-	3. Project completed
7	Replace Bridge Street Bridge, Phoenicia	Flood	The Bridge Street Bridge is an undersized bridge that has been damaged numerous times, and it provides crucial ingress and egress from the hamlet of Phoenicia. The Bridge is currently creating a backwater effect.	County DPW	Ongoing Capability	Cost	-	1. Include in the 2024 HMP
						Level of Protection	-	2. -
						Damages Avoided; Evidence of Success	-	3. -



Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.21-16, the Town of Shandaken identified the following mitigation efforts completed since the last HMP:

- None Identified

Since the adoption of the County's first HMP, the Town of Shandaken has made significant mitigation progress in the following areas:

- None Identified

Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Shandaken participated in a mitigation action workshop in June 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

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

Table 9.21-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X	X	-	-	X	-	-	-	X	X
Drought	X	X	-	X	X	-	X	-	X	X
Extreme Temperature	X	X	-	X	X	-	X	-	X	X
Flood	X	X	-	X	X	-	X	-	X	X
Hazardous Materials	X	X	-	-	X	-	-	-	X	X
Landslide	X	X	-	X	X	-	X	-	X	X
Pandemic	X	X	-	-	X	-	-	-	X	X
Severe Storm	X	X	-	X	X	-	X	-	X	X
Severe Winter Storm	X	X	-	X	X	-	X	-	X	X
Utility Failure	X	X	-	-	X	-	-	-	X	X
Wildfire	X	X	-	X	X	-	X	-	X	X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.21-18).

The table below summarizes the specific mitigation initiatives the Town of Shandaken would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.



Table 9.21-18. Proposed Hazard Mitigation Initiatives

Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2024-Town of Shandaken -001	Continuity of Operations Plan	1, 2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town does not have a continuity of operations plan in place that addresses the hazards of concern laid out in the hazard mitigation plan. Solution: The Town will create a continuity of operations plan to implement during hazard events and will integrate the hazard mitigation plan.	No	No	Less than 1 year	County Emergency Manager, Planning Board	Staff Time	The Town will have a plan to ensure continuity of operations can be carried out during hazard events.	Town Budget	High	LP R	ES
2024-Town of Shandaken -002	Relocation of Town garage, Town Hall, Ambulance Housing and Fire Stations above floodplain	1, 2	Flood, Severe Storm, Severe Winter Storm	Problem: There are multiple critical Town facilities including the Town garage, Town Hall, Ambulance Housing and Fire Stations that are located in or adjacent to the floodplain which limits access and operation during and after emergency response. These structures are located in the 100-year flood level and must be protected to the 500-year flood level. Solution: The Town will elevate and/or relocate these facilities to allow for full access and operation during and post emergency response. The Town will ensure	Yes	No	5 Years	Planning Board, Highway Department, Fire, Police and Ambulance Departments	3 million	The Town will have improved resiliency and access to Town facilities	HMGP, BRIC, FMA, NY Rising Community Reconstruction Program, Stream Management Implementation Grants	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				these facilities are protected to the 500 year flood level.										
2024-Town of Shandaken -003	Upgrades to Phoenicia Municipal Water System	1, 2, 4	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The municipal water supply system is inundated and incapacitated during moderate precipitation events due to damaged and undersized infrastructure which limits and prevents some residents from securing clean water.</p> <p>Solution: The Town will add redundant backup pump for the Filtration plant, will relocate the secondary water supply source, upgrade the secondary source plant with a generator and will complete the High Street Loop. This infrastructure was heavily damaged during TS Irene and from additional smaller flood events.</p>	Yes	No	3 Years	Town Board, Water District Personnel, County Emergency Manager	\$500,000	The Town will secure availability of water where the secondary water source has been diminished.	NYSDOH, HUD, Catskill Watershed Corp Flood Hazard Mitigation Implementation Program, Local Waterfront Revitalization Program, Green Innovation Grant Program	High	SIP	SP
2024-Town of Shandaken -004	Replace Bridge Street Bridge, Phoenicia	1, 2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Bridge Street Bridge is an undersized bridge that has been damaged numerous times, and it provides crucial ingress and egress from the hamlet of Phoenicia. The Bridge is currently creating a backwater effect and is in need of floodplain enhancement measures.</p> <p>Solution: The Town will replace the Bridge Street Bridge with a structure that would be able to convey the 100-year flood. There was an engineering study conducted that showed that the bridge needs to be about six feet higher and 65 feet longer to include floodplain enhancement.</p>	Yes	No	1 Year	Highway Department, Floodplain Manager, County Emergency Manager	5 million	The bridge will be accessible during flood events	HMGP, FMA, Emergency Watershed Protection Program, Bridge NY, Stream Management Implementation Grants	High	SIP	SP



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Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2024-Town of Shandaken -005	Replace Plank Road Bridge and Creekside Drive Bridge	1, 2	Flood, Severe Storm, Severe Winter Storm	Problem: The County owned bridges cause significant backwatering effect during 50-year storms that inundate Miller Road which is a dead-end road that provides access to 20 homes and NYS Route 42. Solution: The Town will replace the Bridge Street Bridge with a structure that would be able to convey the 100-year flood.	Yes	No	1 Year	Highway Department, Planning Board, Engineer	2 million	The bridges will be accessible during flood events	HMGP, FMA, Emergency Watershed Protection Program, Bridge NY, Stream Management Implementation Grants	High	SIP	SP
2024-Town of Shandaken -006	Stony Clove Lane Bridge Replacement	1, 2	Flood, Severe Storm, Severe Winter Storm	Problem: The County owned bridge is significantly undersized and is subject to repetitive erosion and is located at the base of a dead-end Town Road which provides access to nearly 40 homes. Solution: The Town will replace the Bridge Street Bridge with a structure that would be able to convey the 100 year flood.	Yes	No	1 Year	Highway Department, Planning Board, Engineer	2 million	The bridge will be accessible during flood events	HMGP, FMA, Emergency Watershed Protection Program, Bridge NY, Stream Management Implementation Grants	High	SIP	SP
2024-Town of Shandaken -007	Reservoir Rehabilitation	1, 2	Drought, Extreme Temperature, Wildfire	Problem: In the hamlet of Pine Hill, there is an existing reservoir which needs rehabilitation. This holding tank sits on SBL: 4.45-1-17, which is presently owned by Ulster County. At the time of use, it fed a waterline accessed 75 Bonnie View Ave (SBL: 4.45-1-4.100), a property owned by Town of Shandaken, however, is no longer in use. The Fire Department would be able to use this reservoir as an emergency water source. Solution: The Town would like to work with the County to conduct an	No	No	2 Years	Highway Department, Pine Hill Fire Department, Planning Board	TBD after feasibility Study	The Town will have an emergency reservoir.	HMGP, Environmental Restoration Program, Water Infrastructure Improvement Grant	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				engineering study to understand the feasibility of rehabilitating this reservoir for use by the fire department in Pine Hill, in the event of an emergency.										
2024-Town of Shandaken -008	Pinehill Stormwater Retrofit	1, 2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Town experiences issues with Pinehill Stormwater drainage which is dated and cannot keep up with the increasing amount of precipitation and stormwater that is being produced which had led to increased flooding.</p> <p>Solution: The Town will conduct a study to determine the best and most cost-effective way to repair and upsize the stormwater infrastructure to handle the increasing amount of water flow. Once the most cost-effective method is chosen, the Town will acquire funding and will fix the stormwater system.</p>	Yes	No	4 Years	Floodplain Administrator, Engineer, Planning Board, Highway Department	TBD after Study	The Town will experience less flooding.	HMGP, FMA, Emergency Watershed Protection Program, Local Waterfront Revitalization Program, Green Innovation Grant Program	High	SIP	SP
2024-Town of Shandaken -009	Generators for Town Hall, Ambulance Bay, and Phoenicia School	1, 2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm,	<p>Problem: The Town experiences a loss of electricity during extreme weather events which prevents continuity of operations at critical facilities.</p> <p>Solution: The Town will conduct a generator study and will acquire funding to install backup generators at Town Hall, Ambulance Bay, and the Phoenicia school. The Phoenicia School and Ambulance bay will be used for temporary shelters and heating and cooling stations.</p>	Yes	No	3 Years	Facility Managers, Engineer, Planning Board	\$100,000 per generator	The Town will be able to perform continuity of operations.	HMGP, Generator Grant Program, Emergency Shelter Grant Program	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Utility Failure, Wildfire											
2024-Town of Shandaken -010	Improved Data Collection and Storage System to Include Elevation Monuments	1, 2	Flood	Problem: The Town needs a better form of data acquisition to better determine actual risk from flooding. Solution: The Town will install elevation monuments/markers in public locations in each hamlet to lower the costs associated in getting elevation certificates for structures and to provide a more detailed elevation in relation to flood elevations. The locations will be located at key locations throughout the Town.	No	No	1 Year	Ulster County GIS, Planning Board, Engineer	\$100,000	This will better protect existing and future development in the Town	HMGP, FMA, Climate Smart Communities Grant Program, Green Innovation Grant Program	High	SIP	SP
2024-Town of Shandaken -011	Digital Upgrades in Building Department	1, 2	Flood, Landslide, Severe Storm, Severe Winter Storm, Wildfire	Problem: The Town is in need of GIS training and digital upgrades to allow the building department to implement modern technology in evaluating hazard areas in determining risks to structures and property locations. Solution: The Town will implement digital upgrades for the building department and will provide GIS training for local officials to allow electronic post-storm and hazard building inspections and reports from the field which may aid in increasing the community CRS numbers.	No	No	2 Years	Planning Board, Building Department	\$30,000	The Town will have better data to adequately assess flooding and other risks for structures and areas.	HMGP, NY Rising, NRCS Conservation Innovation Program	High	EAP	PI
2024-Town of Shandaken -012	Link Town and County Flood Hazard Mitigation Plan	2, 4	Flood	Problem: The Town Flood Hazard Mitigation Plan and County All-hazard mitigation plan are not linked which makes it difficult for the Town and County to coordinate	No	No	1 Year	Floodplain Manager, Planning Board, County Emergency Manager	Staff Time	The Town and County will have linked mitigation plans.	Town Budget, Ulster County Budget	High	LPR	PR



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				mitigation efforts that involve both entities. Solution: The Town will establish a link with the County hazard mitigation plan in order to complete locally driven projects for flood resiliency. All future updates will occur in the same planning cycle.										
2024-Town of Shandaken -013	Enhanced Flood Prediction	1, 2	Flood, Severe Storm, Severe Winter Storm	Problem: The Town does not have access to real time data in reference to flooding which could help guide the Town in crucial decision making. This would include notifying emergency responders of potentially flooded roads so that they can navigate different routes. Solution: The Town will acquire real time data from USGS to create an enhanced flood prediction and notification system through additional stream gauges and precipitation monitoring stations. The Town will create a command call in cabaility to Birch Creek, Stony Clove, Woodland Valley, Allaben, and any new USGS gauges.	No	No	Within 5 Years	Flood Administrator, County Emergency Manager	\$200,000	The Town will have more reliable and real time data that can guide decision making	HMGP, FMA, NY Rising, NYCDEP, NYSDEC, USGS, Climate Smart Communities Grant Program, Local Waterfront Revitalization Program	High	SIP	SP
2024-Town of Shandaken -014	McKenley Hollow Bridge Mitigation	1, 2	Flood, Severe Storm, Severe Winter Storm	Problem: A section of Ulster County Route 47, downstream of McKenley Hollow, and surrounding homes are very vulnerable to moderate storms and have been inundated by flooding on several occasions. This road is a critical road for access to several businesses as well as a YMCA camp.	No	No	3-5 Years	Highway Department, Engineer, NYCDEP	TBD after Study	The Town will continue to have access to homes and the YMCA camp	Emergency Watershed Protection Program, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementatio	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Solution: The Town will conduct a flood study to determine the best and most cost effective solution to provide and maintain accessibility to residents and the YMCA Camp that has been isolated during minor flooding events.							n Program, Stream Management Implementation Grants			
2024-Town of Shandaken -015	Cell Tower Installation	2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town experiences poor cell services in areas which makes it hard to communicate and receive emergency notifications when the power is out. This also inhibits communication between municipalities, the County and with residents. Solution: The Town will conduct a study to determine where additional communication towers need to be located in order for the Town to have cell service throughout the entirety of its boundaries. The Town will then acquire funding to purchase and install cell towers. Residents, the Town Administration and the County will have the ability to contact one another in emergency situations and power outages and will also be able to receive emergency notification warnings to their cell phones.	Yes	No	Less than 5 years	Highway Department, Engineer, County Emergency Manager	TBD after the study	The Town will be able to communicate with emergency responders and other municipalities	HMGP, BRIC, NRCS Conservation Innovation Program	High	SIP	PR
2024-Town of Shandaken -016	Radio Towers	2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials,	Problem: The Town experiences limited communication capabilities throughout the County which inhibits emergency response capabilities as well as communication between various departments in the Town and neighboring jurisdictions.	Yes	No	Less than 5 years	Engineer, Highway Department, Planning Board	TBD after study	Better communication for emergency responders.	HMGP, BRIC, NRCS Conservation Innovation Program	High	SIP	ES



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Solution: The Town will assist the County in a radio tower study to ensure that the entirety of the County has service with radio tower implementation. The Town will then acquire funding for any radio towers that are needed in the Town limits to ensure communication for emergency responders is available County wide.										
2024-Town of Shandaken -017	Repetitive Loss Mitigation	2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Town has 38 repetitive loss and six severe repetitive loss properties. Some structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage. Progress has been made on elevating buildings and reconstructing new buildings that are more resistant to flooding.</p> <p>Solution: The Town will conduct outreach to the RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information, and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	No	No	Less than 5 Years for Outreach	Floodplain Administrator, Highway Department, Engineer, Property Owners	TBD after mitigation measure is identified	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	HMGP and FMA, BRIC, local cost share by residents	High	SIP	SP
2024-Town of Shandaken -018	Critical Facilities Flood Protection	1, 2	Flood	Problem: The following critical facilities are municipally owned and located in the special flood hazard area:	Yes 💧	No	Within 5 Years	Floodplain Administrator, Highway Department,	TBD by feasibility assessment	Ensures continuity of operations of impacted	FEMA HMGP and BRIC, USDA Community	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<ul style="list-style-type: none">• Bus Facility• Bus Facility• Chichester Post Office• Healthy Kids Extended Day Program• Highway Substation• Highway Substation - Shandaken• MF Whitney Hose Co• Mount Tremper Post Office• Potable Water Treatment Plant: NY5503380• Potable Water Treatment Plant: NY5503380• Potable Water Treatment Plant: NY5505607• Potable Water Treatment Plant: NY5507081• Potable Water Treatment Plant: NY5507211• Potable Water Treatment Plant: NY5507211• Potable Water Treatment Plant: NY5507211• Potable Water Treatment Plant: NY5507211• Potable Water Treatment Plant: NY5515062				Engineer, Property Owners		critical facilities	Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget			



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<ul style="list-style-type: none"> Phoenicia - St. Francis de Sales Parish Phoenicia Elementary School Phoenicia Library Phoenicia Post Office Pine Hill WWTP Shandaken Police Station Shandaken EMS Shandaken Post Office Shandaken Town Hall Sheriff's Substation - Shandaken Ulster County Sheriff Sub Station Verizon CO (VZ-NY58027) <p>Solution: The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the impacted critical facilities to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> Elevation of facility Floodproofing of facility Mobile flood barriers <p>Once the most cost-effective option is identified, the Town will carry out the option.</p>										
2024-Town of Shandaken -019	Culvert and Bridge Inventory	1,2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: AWSMP has conducted culvert assessments and Local Flood Analysis' to monitor the status of culverts in the watershed area and the Town has issues that</p>	Yes	No	Ongoing	AWSMP, Town Highway Superintendent, Planning Board	\$1,000	The priority list allows for culverts and bridges to be sorted by ones that may be in	Emergency Watershed Protection Program, NY Rising Community	High	EAP	PR



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Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				are relevant to these LFA's and culvert assessments. Solution: The Town will continue to create and evolve a bridge and culvert replacement inventory that will take into account flood depth reduction and ensure that future losses are limited.						the most danger.	Reconstruction Program, Flood Hazard Mitigation Implementation Program, Stream Management Implementation Grants			
2024-Town of Shandaken -020	Flood Response Plan	1,2,3	Flood	Problem: The Town does not have an updated and adopted Town-wide Flood Response Plan that addresses Flood concerns that the Town currently has. Solution: The Town will update and adopt the unofficial plan that was developed in 2024 and tested using a low stress tabletop exercise.	No	No	1 Year	Floodplain Administrator, Planning Board	Staff Time	The Town will be better prepared for flood situations.	Emergency Watershed Protection Program, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program, Stream Management Implementation Grants	High	LP R	PP
2024-Town of Shandaken -021	Stream Corridor management	1,2,3, 4	Flood	Problem: The Town does not currently have a strong, integrated emphasis on stream corridor management in the municipal comprehensive plan, site plan review laws, zoning, and local ordinances. Solution: The Town will integrate a strong emphasis on stream corridor management in the municipal comprehensive plan, site plan review laws, zoning, and local ordinances.	No	No	2 Years	Floodplain Administrator, Planning Board	Staff Time	The Town will have better integration of stream corridor management in Town policies, plans and ordinances.	Emergency Watershed Protection Program, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program, Stream Management	High	NS P	N R



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											Implementation Grants			
2024-Town of Shandaken -022	Emergency Management Phone Line	1,2,3	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	<p>Problem: The Town does not currently have a dedicated phone line for Town emergency management communications which hinders the speed of emergency communication.</p> <p>Solution: The Town will create a dedicated analog or satellite phone to ensure Town emergency management communication is available at all times.</p>	No	No	1 Year	County Emergency Manager, Planning Board	TBD	The Town will have stronger emergency management communication capabilities.	HMGP, BRIC, NRCS Conservation Innovation Program	High	EAP	PI
2024-Town of Shandaken -023	USGS Command Center Call In	1,2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Town does not have call in capabilities to Birch Creek, Stony Clove, Woodland Valley, Allaben, and any newly established USGS gages.</p> <p>Solution: The Town will ensure that Birch Creek, Stony Clove, Woodland Valley, Allaben, and all new USGS gages will have call in capabilities and will ensure that capability is maintained on all existing gages.</p>	No	No	Ongoing	Planning Board, USGS	TBD	The Town will have call in capability to all USGS gages located in the Town.	Emergency Watershed Protection Program, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program, Stream Management Implementation Grants	High	EAP	PI
2024-Town of	Town Wide Weather Stations	1,2	Drought,	Problem: The Town has installed a weather station at Town Hall and needs additional weather stations	No	No	4 Years	Planning Board, County	TBD based on location	The Town will have	HMGP, BRIC, NRCS Conservation	High	EAP	PI



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Shandaken -024			Extreme Temperature, Flood, Landslide, Severe Storm, Severe Winter Storm, Wildfire	throughout the Town to ensure safety of all Town residents. Solution: The Town will seek funding for additional weather stations located throughout the Town.				Emergency Manager		more warning time.	Innovation Program			
2024-Town of Shandaken -025	Annual Emergency Equipment Inventory	1,2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town does not conduct an annual inventory of emergency equipment to ensure that continuity of operations and emergency services can be conducted in a timely fashion. Solution: The Town will create, and conduct an annual inventory of emergency equipment, and will maintain a list of needed emergency equipment so that the Town can more easily explore funding for the equipment to ensure continuity of operations.	No	No	Ongoing	Planning Board, UC Division of Emergency Management	Staff Time	The Town will ensure that their emergency equipment is up to date and working.	Town Budget	High	EAP	PR, ES
2024-Town of Shandaken -026	Emergency Animal Shelter	1,2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide,	Problem: There currently are no active plans for Town sheltered animals in the event of an emergency. Solution: The Town will develop a preparedness plan for Town sheltered animals and will seek funding to produce an emergency kennel on higher ground.	No	No	4 Years	Animal Shelter Staff, Planning Board, County Emergency Manager	TBD	Animals at the shelter will be protected from incoming emergency events	HMGP, BRIC, Flood Hazard Mitigation Implementation Program	High	LPR	ES



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Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire											
2024-Town of Shandaken -027	Emergency Parking	1,2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town does not currently have a strategy for emergency parking to prevent storm isolation. Solution: The Town will create a strategy for pre-emergency parking to prevent storm isolation including designation of emergency parking locations to accommodate evacuee vehicles in Town.	No	No	1 Year	Highway Department	Staff Time	The Town will be prepared for emergency vehicle parking and evacuation	Town Budget	High	LP R	PR
2024-Town of Shandaken -028	Create priority list of emergency evacuation zones and a notification and action procedure.	1,2,3	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town does not maintain a priority list of emergency evacuation areas, nor do they have an action procedure laid out for the Town. Solution: The Town will create and maintain a priority list of emergency evacuation zones and will also develop an action procedure to put in place in the event of an emergency. The Town	No	No	1 Year	County Emergency Manager, Planning Board	Staff Time	The Town will be better prepared to handle emergency evacuations in a timely fashion.	Town Budget	High	LP R	PR





Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
			Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	will also address evacuation by providing signage and information regarding evacuation to the residents.										
2024-Town of Shandaken -029	Acquisition and Elevation Outreach	1,2,3, 4	Flood	Problem: The Town has repetitive and severe repetitive loss properties that may be interested in having their property acquired or elevated through grant funding so that they do not have to constantly have their properties flooded. Solution: The Town will conduct outreach to the properties that are eligible for acquisition or elevation under FEMA's grant programs to educate them about their opportunities.	No	No	Ongoing	Floodplain Administrator, Planning Board, Engineer, FEMA	Staff Time	The Town will have less repetitive and severe repetitive loss properties.	Town Budget	High	EAP	PI
2024-Town of Shandaken -030	Repetitive Loss Analysis	1,2	Flood	Problem: The Town is unaware of where their repetitive loss structures are located, and therefore cannot make accurate outreach to property owners regarding possible grant funding. Solution: The Town will work to receive ISAA data in 2024 to help conduct Repetitive Loss Analysis so that they can better assist property owners affecting by flood.	No	No	1 Year	Floodplain Administrator, Planning Board, Engineer, FEMA	Staff Time	The Town will have more information about flooding properties.	FMA, HMGP, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	LPR	PI
2024-Town of Shandaken -031	Demolition of Vacant and Abandoned Structures	1,2	Flood, Wildfire	Problem: The Town currently has abandoned and vacant structures that are subject to helping wildfire spread and creating flood debris.	No	No	Ongoing	Planning Board, County Emergency Manager	TBD based on structure	The Town will have less structures subject to wildfire and	FMA, HMGP, NY Rising Community Reconstruction Program, Flood Hazard	High	LPR	PP



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Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Solution: The Town will identify abandoned and vacant structures and will peruse funding for the demolition of these structures, so that the impacted areas can become buildable land or open space.						less potential flood debris.	Mitigation Implementation Program			
2024-Town of Shandaken -032	Flood Outreach	1,2,3	Flood	<p>Problem: The Town does not distribute floodplain best management practices to their residents, therefore sometimes they are unaware of problems that arise with the flooding.</p> <p>Solution: The Town will develop education and outreach that expands upon floodplain management in a method that is easy for residents to read and obtain.</p>	No	No	1 Year	Floodplain Administrator, Planning Board	Staff Time	Residents will become more knowledgeable	FMA, Town Budget	High	EAP	PI
2024-Town of Shandaken -033	Backup generators	1,2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	<p>Problem: Some Town buildings do not have backup generators or flood mitigation and cannot perform continuity of operations during flooding and power outages.</p> <p>Solution: The Town will evaluate what buildings need to be floodproofed and what buildings need backup power and will document that before acquiring funding for floodproofing and the installation of generators.</p>	Yes	No	Ongoing	Engineer, Planning Department, Facility Managers	TBD for each building	The Town will have knowledge of which buildings need floodproofing or backup generators.	HMGP, FMA, BRIC	High	SIP	SP
2024-Town of	Bridge Replacement	1,2	Flood, Severe	Problem: The Town has been experiencing issues relating to	Yes	Yes	2 Years	Highway Department,	Staff Time	The Town will be better	HMGP, FMA, BRIC, NY	High	LPR	PR



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
Shandaken -034	Program Ordinance		Storm, Severe Winter Storm	<p>numerous bridge replacements which cause some crossings to be closed for an extended period of time, which also can impact emergency response time.</p> <p>Solution: The Town will develop and implement an ordinance that addresses the improvement of the bridge replacement program by using climate informed science that requires all crossings to be built to a specific standard.</p>				Planning Department		prepared for bridge replacements	Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program			
2024-Town of Shandaken -035	Capture/survey High Water Marks after Flood	1,2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Town does not track high water marks after flooding events to maintain a database that can be used to prepare the Town for future flooding events.</p> <p>Solution: The Town will begin tracking high water marks after flood events so that a database can be created, maintained, and used to prevent flooding in the future.</p>	No	No	Ongoing	Floodplain Administrator, Planning Department, USGS	Staff Time	The Town will be better prepared for flooding events.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	EAP	PI
2024-Town of Shandaken -036	Fox Hollow Bridge Hydraulic Assessment	1,2	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The Town is unsure if Fox Hollow bridge over Esopus Creek, a County owned Bridge, and a Town owned bridge over Fox Hollow Creek are adequately sized and wants to ensure that it does when it is scheduled for replacement.</p> <p>Solution: The Town will retain a contractor to conduct a full hydraulic assessment for both Fox Hollow bridges to ensure that the bridges openings are adequately sized and that the new bridges span the channel and floodplain when the</p>	Yes	No	3 Years	Floodplain Administrator, Engineer, Planning Board	TBD	The Town will have an assessment prepared for the bridge.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	LPR	PP



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				bridges are scheduled for replacement.										
2024-Town of Shandaken -037	Evaluation of flood control levee	1,2	Flood	Problem: The flood control levee that currently lines the left bank of Bushnellville Creek and Esopus Creek confluence, has experienced erosion at the downstream end. Solution: The Town will conduct an engineering study to see if there is a way to limit erosion at the downstream end. The Town will also conduct routine maintenance.	Yes	Yes	4 Years	Floodplain Administrator, Planning Board	TBD	The Town will experience less flooding	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	SIP	SP
2024-Town of Shandaken -038	Flood Policy and Signage	1,2	Flood	Problem: The Town does not have effective signage and road closure barriers to reduce risks associated with flooding by temporarily closing floodprone Town roads during flooding events. Solution: The Town will establish policy, effective signage, and road closure barriers to reduce risks associated with flooding by temporarily closing floodprone town roads during flooding events.	No	No	2 Years	Highway Department, Floodplain Administrator, Planning Department	\$10,000	The Town will be better prepared for temporary flooding.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	LP R	PI
2024-Town of Shandaken -039	Floodplain enhancements in Mt. Tremper	1,2	Flood	Problem: The Town experiences flood issues in Mt. Tremper along the Esopus Creek and is in need of floodplain enhancements. Solution: The Town will conduct an engineering study to determine the best and most cost-effective solution. This would involve lowering the elevation of the right bank and left bank floodplain and removal of the existing levee. Construction of the floodplain enhancement would require	No	No	4 Years	Highway Department, Planning Department, Engineer	TBD after study	The Town will be better prepared for flood issues in Mt. Tremper.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	SIP	SP



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				removal of sections of Mount Pleasant Road and Risely Road and relocation of some of the homes along these roads as well. The Town will also acquire funding for the implementation of these projects.										
2024-Town of Shandaken -040	Anchoring of Fuel Tanks:	1,2	Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm,	Problem: The Town has fuel oil and propane tanks that are not secured and subject to leaks and pollution. Solution: The Town will hire an engineer to evaluate the relocation or securing of fuel oil and propane tanks.	No	No	3 Years	Engineer, Planning Board	TBD	The Town will be better protected from pollution.	HMGP, Catskill Watershed Corporation program	High	SIP	SP
2024-Town of Shandaken -041	Bonnie View Avenue County Bridge	1,2	Flood, Severe Storm, Severe Winter Storm	Problem: Crystal Spring Bridge, a County-owned bridge located on Bonnie View Drive, is currently failing, and experiencing overtopping which prevents access to a Town critical water treatment facility. Solution: The Town will conduct an engineering study to determine the best and most cost-effective design for a bridge replacement. Once that is determined, the Town will acquire funding for the installation of the bridge.	Yes	No	4 Year	Engineer, Floodplain Administrator	TBD after Engineer	The Town will maintain access to the water treatment facility.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	SIP	SP
2024-Town of Shandaken -042	Alton Creek Flooding	1,2	Flood, Severe Storm, Severe Winter Storm	Problem: Alton Creek floods and impacts Bonnie View Avenue at Station Road and Mill Street which floods structures that are nearby. Numerous road crossings are overtopped at the 10-year flood due to entrenched and undersized channels. One of the structures that	Yes	No	4 Years	Engineer, Planning Department, Floodplain Administrator	\$5 Million	Reduced roadway flood risk, reduced flood levels and velocities, improved channel stability.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation	High	SIP	SP



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Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				is impacted is a water treatment facility. Solution: The Town will acquire funding for the design and recommendation that was provided in the Pine Hill LFA, which includes removing unnecessary structures, channel and floodplain work, new intersection layouts, and new crossings.						Reduced threat from flooding to property & structures on lands of Wooton	Implementation Program			
2024-Town of Shandaken -043	Birch Creek	1,2	Flood, Severe Storm, Severe Winter Storm	Problem: The Town experiences flooding along streets and structures that are located along Birch Creek and has done LFA to detail specific problem areas related to the creek, which impact 11-15 homes and 1 business. Solution: The Town will acquire funding to implement the recommendation and design suggestions which include enlarging the culvert and widening the channel width.	No	No	Within 5 years	Floodplain Administrator, Engineer, Planning Board	\$1 Million	The Town will experience reduced flooding in the area.	HMGP, FMA, BRIC, NY Rising Community Reconstruction Program, Flood Hazard Mitigation Implementation Program	High	SIP	SP
2024-Town of Shandaken -044	Crop Loss Insurance Outreach	1, 2, 3, 4	Flood, Drought, Extreme Temperature, Severe Storm, Severe Winter Storm	Problem: Farmers in the Town and County are unaware of how crop loss insurance works to protect them against the loss of crops due to natural disasters. Solution: The Town will work with the County will create a workshop to educate farmers on how they can create a crop loss insurance policy and will explain the benefits.	No	No	1 Year, Ongoing once established	County Mitigation Planning Committee, County Environmental Management Council, Town Farmers, USDA	Staff Time	This action provides farmers with the knowledge of how Crop Loss insurance works and helps to protect their income from hazard events that may impact	County Budget, Town Budget	High	EAP	PI



Project Name	Project Title	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead and Support Agencies	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
										growing seasons.				

Notes:

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

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
EHP	Environmental Planning and Historic Preservation
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

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

Timeline:

The time required for completion of the project upon implementation.


Cost:

The estimated cost for implementation.

Benefits:

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

Critical Facility:

Yes  Critical Facility located in 1% floodplain

Mitigation Category:

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

CRS Category:

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



The prioritization criteria provided in Volume 1 Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as ‘High’, ‘Medium’, or ‘Low.’ The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.21-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Town of Shandaken-001	Continuity of Operations Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2024-Town of Shandaken-002	Relocation of Town garage, Town Hall, Ambulance Housing and Fire Stations above floodplain	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2024-Town of Shandaken-003	Upgrades to Phoenicia Municipal Water System	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	High
2024-Town of Shandaken-004	Replace Bridge Street Bridge, Phoenicia	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-005	Replace Plank Road Bridge and Creekside Drive Bridge	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-006	Stony Clove Lane Bridge Replacement	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-007	Reservoir Rehabilitation	1	1	1	1	1	1	0	0	1	1	1	1	1	0	11	High
2024-Town of Shandaken-008	Pinehill Stormwater Retrofit	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	High
2024-Town of Shandaken-009	Generators for Town Hall, Ambulance Bay and Phoenicia School	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-010	Improved Data Collection and Storage System to Include Elevation Monuments	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-011	Digital Upgrades in Building Department	1	1	1	1	1	1	0	0	1	1	1	1	0	1	11	High



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Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Town of Shandaken-012	Link Town and County Flood Hazard Mitigation Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2024-Town of Shandaken-013	Enhanced Flood Prediction	1	1	1	1	1	1	0	1	1	0	1	1	0	1	11	High
2024-Town of Shandaken-014	McKenley Hollow Bridge Mitigation	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-015	Cell Tower Installation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-016	Radio Towers	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-017	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-018	Critical Facilities Flood Protection	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2024-Town of Shandaken-019	Culvert and Bridge Inventory	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-020	Flood Response Plan	1	1	1	1	1	1	1	1	1	1	0	1	0	0	11	High
2024-Town of Shandaken-021	Stream Corridor management	1	1	1	1	1	1	1	1	1	1	0	0	0	0	10	High
2024-Town of Shandaken-022	Emergency Management Phone Line	1	0	1	1	1	1	1	0	1	1	1	1	1	1	12	High
2024-Town of Shandaken-023	USGS Command Center Call In	1	1	0	1	1	1	0	1	1	1	1	1	0	1	11	High
2024-Town of Shandaken-024	Town Wide Weather Stations	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Town of Shandaken-025	Annual Emergency Equipment Inventory	0	0	1	1	1	1	1	0	1	1	1	1	0	1	10	High
2024-Town of Shandaken-026	Emergency Animal Shelter	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-027	Emergency Parking	1	0	1	1	1	1	0	1	1	1	1	0	0	1	11	High
2024-Town of Shandaken-028	Create priority list of emergency evacuation zones and a notification and action procedure.	1	0	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2024-Town of Shandaken-029	Acquisition and Elevation Outreach	1	1	0	1	1	1	0	1	1	1	0	0	0	1	9	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Town of Shandaken-030	Repetitive Loss Analysis	1	1	1	1	1	1	1	1	1	1	0	1	0	1	12	High
2024-Town of Shandaken-031	Demolition of Vacant and Abandoned Structures	1	1	0	1	1	1	0	1	1	1	1	0	0	1	10	High
2024-Town of Shandaken-032	Flood Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2024-Town of Shandaken-033	Backup generators	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-034	Bridge Replacement Program Ordinance	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-035	Capture/survey High Water Marks after Flood	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-036	Fox Hollow Bridge Hydraulic Assessment	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-037	Evaluation of flood control levee	1	1	1	1	1	1	1	0	1	0	0	1	1	1	13	High
2024-Town of Shandaken-038	Flood Policy and Signage	1	0	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2024-Town of Shandaken-039	Floodplain enhancements in Mt. Tremper	1	1	1	1	1	1	0	1	1	1	0	0	0	1	10	High
2024-Town of Shandaken-040	Anchoring of Fuel Tanks:	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Shandaken-041	Bonnie View Avenue County Bridge	1	1	1	1	1	1	1	0	1	0	1	1	1	1	12	High
2024-Town of Shandaken-042	Alton Creek Flooding	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-043	Birch Creek	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-Town of Shandaken-044	Crop Loss Insurance Outreach	0	1	1	1	1	1	1	1	1	1	1	1	0	1	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).