



9.10 TOWN OF LLOYD

This section presents the jurisdictional annex for the Town of Lloyd 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 Lloyd'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.

9.10.1 Hazard Mitigation Planning Team

The Town of Lloyd 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 Building Department, Highway Department, and Supervisor. The Town Supervisor, Highway Superintendent, Highway Secretary, Town Councilman, and Building Department represented the community on the Ulster County Hazard Mitigation Plan Planning Partnership, Steering Committee, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

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 9.10-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: David Plavchak, Supervisor Address: 12 Church Street, Highland, NY 12528 Phone Number: 845-691-2144 ex. 101 Email: dplavchak@townoflloyd.com	Name/Title: John Fraino, Town Councilman Address: 12 Church Street, Highland, NY 12528 Phone Number: 845-235-3162 Email: jfraino@townoflloyd.com
NFIP Floodplain Administrator	
Name/Title: Anthony Giangrosso, Floodplain Administrator Address: 12 Church Street, Highland, NY 12528 Phone Number: 845-691-2144 ex. 116 Email: agiangrasso@townoflloyd.com	
Additional Contributors	
Name/Title: Rich Klotz, Highway Superintendent Method of Participation: Provided information and data for worksheets	
Name/Title: Denise Rhoades, Highway Department Secretary Method of Participation: Provided information and data for worksheets.	
Name/Title: David E Barton II, Building Department Method of Participation: Provided information and data for worksheets.	

9.10.1 Municipal Profile

The Town of Lloyd is in the eastern portion of Ulster County bordering the Hudson River, south of the city of Kingston. The Town consists of 33.3 square miles, 31.3 of which are land and 2.0 of which are water. The Town of Lloyd was formed in 1845 and has long been a destination for outdoor recreation due to its



proximity to the Catskill Mountains and the Hudson River. The hamlet of Highland, within the Town of Lloyd, is home to the world’s longest elevated pedestrian bridge. This bridge, the Walkway Over the Hudson, connects Highland on the west bank of the Hudson River to Poughkeepsie on the east bank. In their 2013 comprehensive plan, the Town of Lloyd states that their vision is to “preserve the rural, residential, and agricultural character of the community and the town’s rich tapestry of environmental resources while encouraging commercial development that enhances the tax base without detracting from historical settlement patterns and desired quality of life.”

According to the U.S. Census, the 2020 population for the Town of Lloyd was 11,133, a 2.5 percent increase from the 2010 Census (10,863). Data from the 2020 American Community Survey 5-year Estimates indicate that 6.5 percent of the population is 5 years of age or younger, 18.3 percent is 65 years of age or older, 10.4 percent have disabilities, and 4.4 percent are below the poverty threshold. 0.8 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.

9.10.2 Jurisdictional Capability Assessment and Integration

The Town of Lloyd 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 Lloyd 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 Lloyd. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.



Table 9.10-2. 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
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 42, Adopted April 2006 – Building Code Administration; New York State Uniform Code and Energy Conservation Code	State and Local	Building Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town of Lloyd adopted the New York State				
Zoning/Land Use Code	Yes	Chapter 100, Adopted April 7, 2010	Local	Zoning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This chapter is enacted to promote and protect the public health, safety, convenience, aesthetics, natural, agricultural, and cultural resources, amenities, and general welfare of the people, including focusing on potential impacts of hazards.				
Subdivision Ordinance	Yes	Chapter 90, Adopted April 7, 2010	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The subdivision regulations include taking into account building purposes without danger to health or peril from fire, flood or other hazards.				
Site Plan Ordinance	Yes	Chapter 100, Adopted April 7, 2010	Local and County	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Regulations within Site Plan allow the Town to control density, road networks, water and sewer service, additional emergency vehicle access issues, and proximity to steep slopes, stormwater control, flood plains and some manmade elements which would negatively impact properties should those facilities fail.				
Stormwater Management Ordinance	Yes	Chapter 55, Adopted April 12, 2006	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Granting the power to enforce stormwater facility maintenance helps protect properties both locally and regionally by ensuring proper maintenance of stormwater elements, controlling runoff of stormwater to reduce the possibility of flooding, and reducing the soil and other nutrients from washing into watercourses impacting native flora and fauna.				
Post-Disaster Recovery/ Reconstruction Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinances	Yes	Chapter 54 Environmental Review, Adopted October 12, 1983 Chapter 66 Illicit Discharges, Adopted September 13, 2006	Local	Planning Board, Town Board, Building Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Environmental review by various Town departments and Boards allows a “larger picture” policy of environmental protection. Nearly all Boards perform review under SEQRA, in addition to more detailed review of local issues, especially related to viewsheds, watercourse impacts and flooding. Illicit discharges, such as dumping of materials and liquids, either intentional or				



	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
accidental, are enforced by the Building Department, often in partnership with DEC Region 3 officers. In addition to Clean Air regulation under the Town's burning permits, Clean Water Act regulations help ensure clean water for both potability and recreational human activity, in addition to the lower impact on native flora and fauna.				
Flood Damage Prevention Ordinance	Yes	Chapter 60, Adopted June 14, 2000	Federal, State, County and Local	Town of Lloyd
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town Board of the Town of Lloyd, Ulster County, New York, finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Town of Lloyd 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. In order to minimize the threat of such damages and to achieve the purposes and objectives hereinafter set forth, this chapter is adopted.				
Wellhead Protection or Water Restrictions	Yes	Chapter 98, Adopted March 6, 1969	Local	Water Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town has a strong interest in protecting primary sources of drinking water. A portion of the Town's potable water is supplied via wells. There are also policies in place to inform those property owners in the water districts in the event of a drought in order to reduce the consumption of water. Things like pool filling, lawn watering and a general request to reduce usage by taking shorter showers and limiting washing of cars, clothes, and the like are all possible items on the Town's water reduction list. An important additional benefit for reducing water consumption is to ensure that water for fire operations is available when needed.				
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	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
Comprehensive / Master Plan	Yes	2013 Comprehensive Plan	Local	Various Departments
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The comprehensive plan makes recommendations for a large number of things that help the town anticipate and reduce risk to the populace. The Plan recognizes that the Town of Lloyd has large areas of flood plains, steep slopes, and environmentally sensitive areas. The Plan encourages limited to no development in and around those areas. The Plan also notes that the Fire Department and the Police Department are critical pieces helping to protect the health, safety, and welfare of the Town. The Plan also advocates density increases in areas only served by municipal water and sewer and close to major roadways. Multiple routes from developments to ensure ingress and egress in the event of blockage of one or more routes into or out of the development or facility.				
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	-	-	-



	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>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>				
Transportation Plan	No	-	-	-
The Town is actively looking for funding and appropriate agencies to assist in the development of a town traffic assessment and transportation plan				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/ Sustainability Plan	No	-		
(see also the Esopus/Lloyd Community Resilience Summary of Findings (October 2021))				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management / Emergency Operations Plan	Yes	Emergency Management Plan	Local	Town Board, Lloyd Police, Highland Fire Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Town Emergency Management Plan not only spells out the various roles and responsibilities of personnel in the event of an incident, and it also details different levels of response based on the size or impact of the event. It lists several local, county, state and national agencies and departments who can assist in response and recovery with personnel and equipment.				



	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
<p>The plan also recognizes the post event needs to maintain safety for residents while impacted properties are restored. The Plan recognizes that the Building Department will be important to that recovery process, especially during damage determination and restoration.</p> <p>Additional events such as pandemics, train derailment with hazardous chemicals, or mass shootings will be incorporated in the next incarnation of the EMP.</p>				
Continuity of Operations Plan	Yes	Emergency Management Plan	Local	Town Board, Lloyd Police, Highland Fire Department
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The EMP spells out roles for elected officials and personnel should higher level leadership is unavailable, for any reason, to respond in their designated roles and responsibilities. Maintaining appropriate leadership greatly reduces redundant job duties in the event of an emergency, by having a central point of control to give direction to various agencies and personnel should some operational failure occur. In addition to saving time and money, the continuity of command, communication and control serves to maintain operational efficiency in the response and recovery efforts.</p>				
Substantial Damage Response Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Post-Disaster Recovery Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Public Health Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Other	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				

Development and Permitting Capability

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

Table 9.10-3. 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 issues Building and Development Permits. The Planning Board issues Special Use Permits which are enforced by the Building Department.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	The Building Department issues Floodplain Permits
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	The as of right build out is about 25% of the available buildable area. That percentage would



Indicate if your jurisdiction implements the following	Yes/No	Comment
		drop significantly if the total possible build out were calculated.

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 Lloyd and their current responsibilities that contribute to hazard mitigation.

Table 9.10-4. 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 for the Town of Lloyd exists and operates pursuant to the provisions of the Town Law § 271 et seq. and was appointed by resolution of the Town of Lloyd 11-18-1955. The Planning Board approves plats involving new streets and highways in the Town has the powers and duties imposed upon it by the provisions of the Town Law §§ 276, 277 and 278. There are eight (8) member on the board.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals has all the powers prescribed by all applicable state statutes (Article 16, Town Law), local laws, ordinances, and these rules. There are seven (7) members on the board.
Planning Department	Yes	The planning department is located within the Building/Zoning Enforcement Department, and is overseen by the Director of Building, Planning and Zoning Enforcement.
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The Environmental Conservation Council's (ECC) mission is to ensure that its residents, business people, and visitors continue to enjoy clean air and water, biodiversity of plants and wildfire, and scenic beauty.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	There are many state, county and town laws that must be followed when opening a new business. The time-consuming process of dealing with all these tasks can be difficult, but we're here to help. The all-volunteer Lloyd Economic Development Committee (EDC) was formed to help new and existing business. The EDC is comprised of Lloyd businesspeople with vast experience and expertise in a number of business-related topics.
Public Works/Highway Department	Yes	The Highway Department is made up of 11 men in charge of plowing a total of 130 lane miles.
Construction/Building/Code Enforcement Department	Yes	The Building/Zoning Enforcement Department is comprised of the Director of Building, Planning and Zoning Enforcement and two Deputy Building Inspectors.
Emergency Management/Public Safety Department	Yes	The Lloyd Police Department's mission is to protect and serve the public through police action. In carrying out this mission, the department works as a team to make certain that the citizens of the Town of Lloyd are afforded the best protection and service.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, how its related to hazard mitigation)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Stormwater Management-Building Department Water & Sewer Department
Mutual aid agreements	Yes	Fire Department has Mutual Aid companies throughout Ulster County plus the City of Poughkeepsie. The Building Department can also be called on to respond to adjoining towns if required.
Other	Yes	Recreation Department Historian's Office Comprehensive Plan Review Committee 2022
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Director of Building, Planning and Zoning, in conjunction with the Planning Board and outsourced engineers serve to develop long term planning policy and procedures for the Town.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering is outsourced and comes from different engineering companies.
Planners or engineers with an understanding of natural hazards	Yes	Engineering is outsourced and comes from different engineering companies.
Staff with expertise or training in benefit/cost analysis	Yes	In addition to a Town Bookkeeper, who reports directly to the Supervisor, the Director of Building Planning and Zoning also performs cost/benefit for both proposed development and Town sponsored projects.
Professionals trained in conducting damage assessments	Yes	The Building Department is regularly trained in the performance of damage assessment. Water/Sewer and Highway Department personnel also perform assessments for items under their purview.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	The Building Department, especially the Director, are proficient in GIS mapping and geo-statistical analysis.
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	Yes	The Town hires an outside surveyor to perform work for it.
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 Lloyd.

Table 9.10-5. 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	No	-
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



Financial Resources	Accessible or Eligible to Use? (Yes/No)	Comments (relation to hazard mitigation)
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	No	-
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])	No	-

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 9.10-6. 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	Limited robo-call for information. Residents must sign up in order to be called.
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	Information about hazardous waste collection
Social media for hazard mitigation education and outreach	Yes	Facebook
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Public Access channel could be utilized for this purpose
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? • If yes, please describe.	Yes	Town has social media, robo-call, email lists where information is given to residents as needed, with guidance on how to respond, if required.

Community Classifications

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

Table 9.10-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Unsure	Unsure
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3-3Y	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
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 9.10-8. 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	Moderate
Severe Winter Storm	Strong
Utility Failure	Moderate
Wildfire	Moderate

9.10.3 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 Lloyd.

Table 9.10-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties (FMA definition)	# RL Properties (NFIP definition)	# SRL Properties
Town of Lloyd	51	43	\$1,592,195.69	0	3	1

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 Lloyd.

Table 9.10-10. 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? 	<p>Along the Twalfskill Creek, flooding is a regular occurrence during heavy rain events. The Twalfskill runs along Route 44/55-Vineyard Ave and passes through the “hamlet” area of Town. During hurricanes Irene, Lee and Sandy, the “hamlet” area suffered flooding. The creek also passes close to the Town’s sewer treatment plant, which also experienced flooding. Areas along the Black Creek have also experienced flooding. The Black Creek flooding during the three hurricanes caused the most dollar damage in the Town, with one house being moved on its foundation. Some flooding can occur on properties near the Swartekill in the western part of the Town.</p> <p>The Town’s parcel tracking software, Municipity, does include an area where damage to structures as the result of flooding (and fire, lightening, trees, etc) can be recorded.</p>
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)? 	No list is maintained.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	The Building Department uses FEMA checklists for damage determinations. The last time an assessment was required that used those checklists was for Hurricane Sandy.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	No properties have been mitigated.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes, the flood risk maps seem to accurately display the areas likely to flood.
NFIP Compliance	
What local department is responsible for floodplain management?	The Building Department
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, the Town has a GIS staffer who has the ability to create maps showing areas likely to flood based on various sea level and rain event sizes.



NFIP Topic	Comments
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? 	The Town regularly participates in training offered by the NYS Floodplain and Stormwater Managers Association. More training is always welcome.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	The Building Department reviews all plans for proximity to areas prone to flooding using FIRM and GIS data. When required, the department counsels permit applicants on routes to comply with the Town's Flood Damage Prevention chapter in the Code Book. On occasion, the Town Engineer is used to assist in determinations and design modification proposals.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Chapter 60.2.1 defines "Substantial Improvement" as "Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the start of construction of the improvement."
What are the barriers to running an effective NFIP program in the community, if any?	Staffing
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	N/A
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? 	Chapter 60, adopted as Local Law #3-2000 with amendments
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Unsure
Are there other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Planning Board reviews all plans using the DEC Stormwater Design Manual in an effort to reduce runoff off site.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Unsure

9.10.4 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 9.10-11 and Table 9.10-12 summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.10-11. 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



Type of Development	2017		2018		2019		2020		2021		2022	
Single Family	33	0	43	0	28	0	28	0	29	0	8	0
Multi-Family	0	0	2	0	13	0	6	0	2	0	2	0
Other (commercial, mixed-use, etc.)	5	0	35	0	8	0	8	0	6	0	18	0
Total New Construction Permits Issued	38	0	80	0	49	42	50	0	37	0	28	0

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

Table 9.10-12. 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				
The Commons at Highland	Mixed Use	-	Wildfire Interface, Hazmat Road Buffer, Hazmat Pipe Buffer, Steep Slope	Completed
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years				
180 South Street	Industrial	-	Wildfire Interface, Wildfire Intermix, 100 Flood Hazard Area, 500 Flood Hazard Area, Steep Slope	Pending
The Villages at Highland	Residential	-	Wildfire Interface, 100 Floodplain, 500 Floodplain, Hazmat Road Buffer, Hazmat Pipe Buffer, Steep Slope	Pending
Silver Gardens	Residential	-	Wildfire Interface, Hazmat Rail Buffer, Hazmat Road Buffer, Hazmat Pipe Buffer, Steep Slope	Approved

9.10.5 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 Lloyd'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 Lloyd has significant exposure are provided. The maps show the location of potential new development, where available.



Figure 9.10-1. Town of Lloyd Inundation and Flood Hazard Area Extent and Location Map

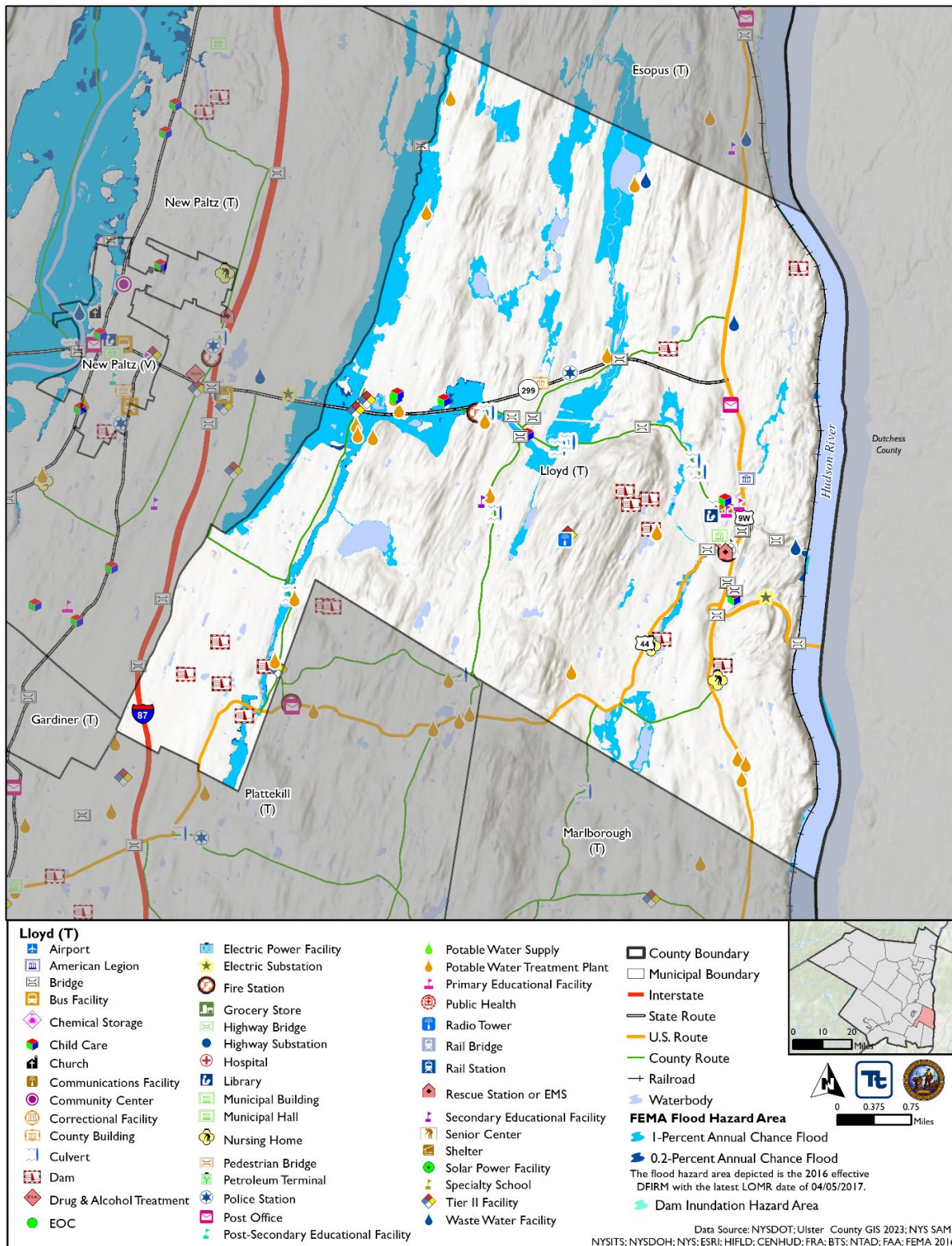




Figure 9.10-2. Town of Lloyd Hazardous Materials Hazard Area Extent and Location Map

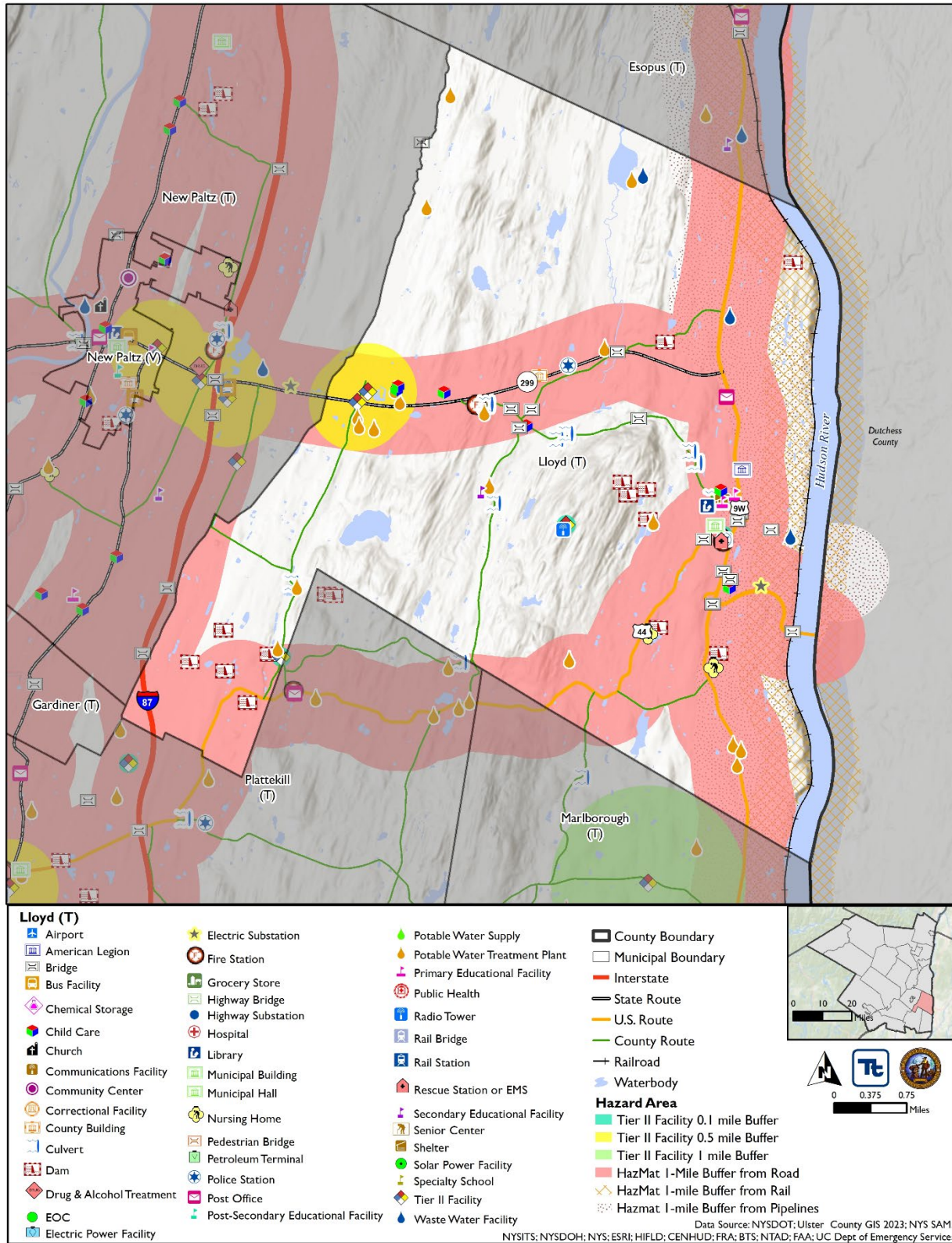




Figure 9.10-3. Town of Lloyd Surges and Sea Level Hazard Area Extent and Location Map

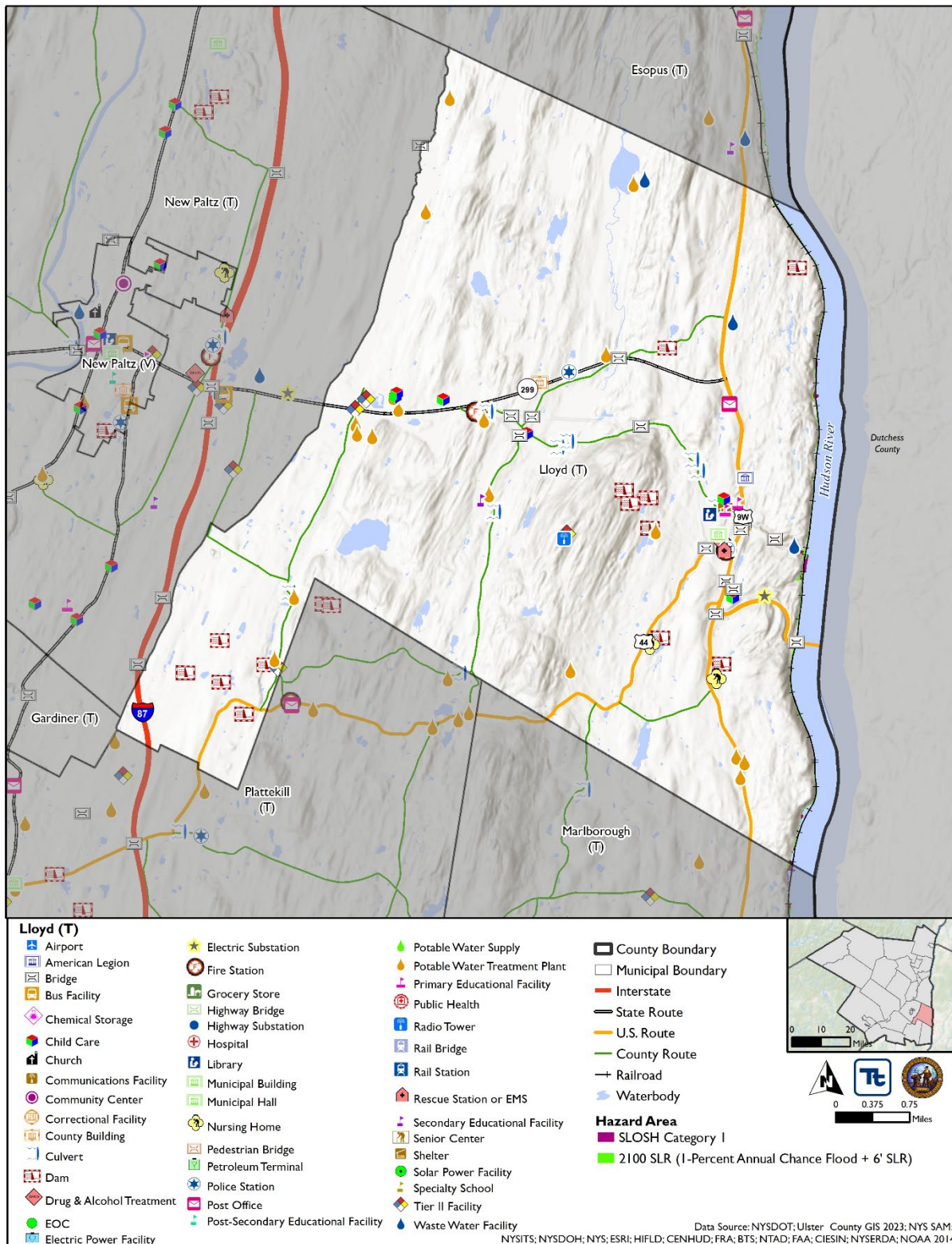
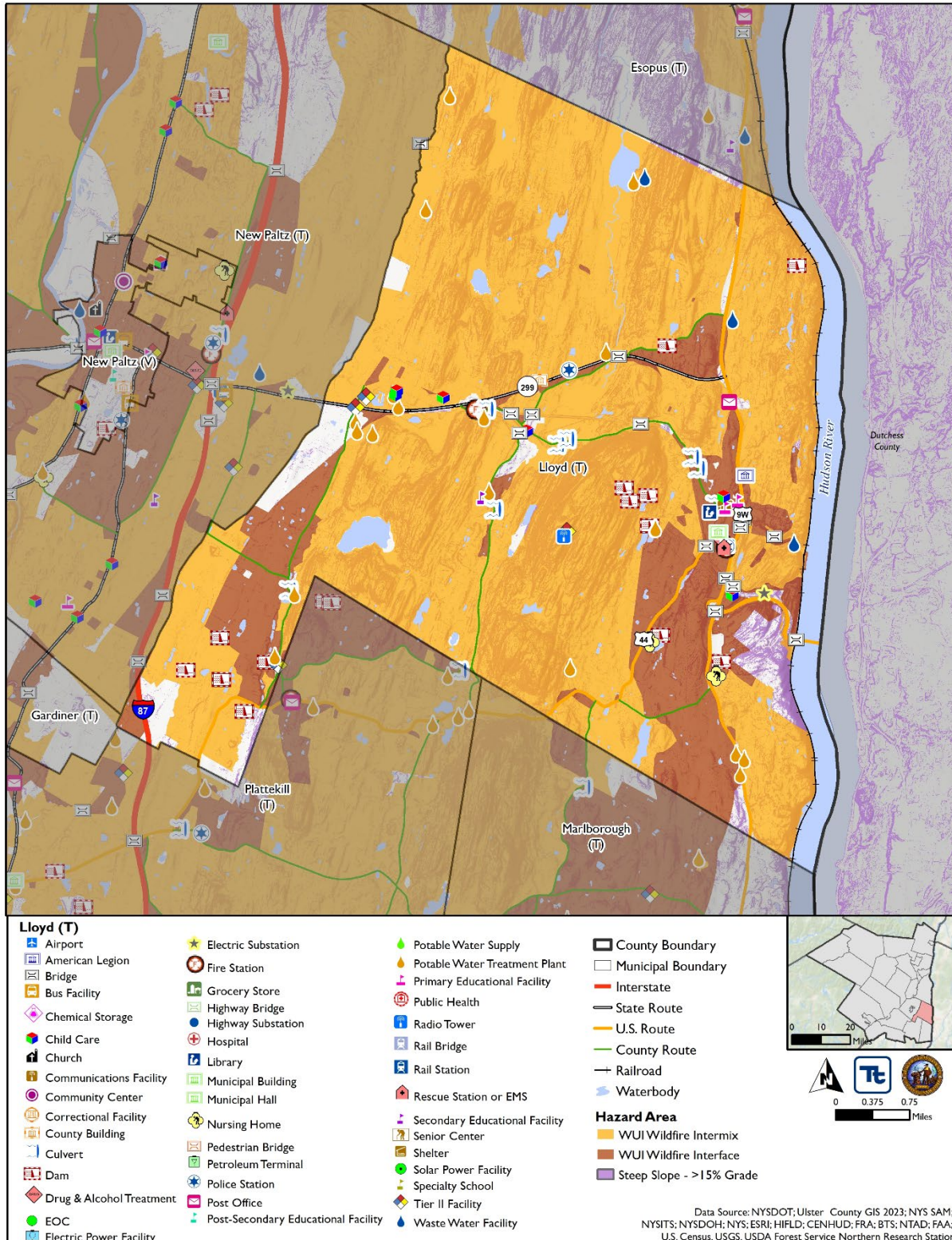




Figure 9.10-4. Town of Lloyd Steep Slope and Wildfire Hazard Area Extent and Location Map





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 Lloyd'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 9.10-13 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 9.10-13. 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.	The Town did not incur any additional damages.
March 14-16, 2017	Severe Winter Storm (DR-4322)	Yes	A coastal storm impacted the region from March 14th through the 16th, 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 incur any additional damages.
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 incur any additional damages.
January 20, 2020 – Present	Covid-19 Pandemic (DR-4480) (EM-3434)	Yes	Between March 1, 2020 and February 3, 2022, Ulster County reported 54,783 confirmed cases of COVID-19, and 414 total fatalities.	The Town did not incur any additional damages.
December 24-25, 2020	Flood	No	Heavy rain fell over the area during Christmas, causing flooding across Ulster County.	The Town did not incur any additional damages.
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 incur any additional damages.
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 incur any additional damages.
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 experienced heavy rainfall which left many streets, fields and farms flooded.	The Town did not incur any additional damages.
February 3-4, 2022	Ice Storm	No	A significant ice storm, the result of two days of snow, rain and freezing	Several water main breaks as a result of the freezing



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			temperatures damaged trees and power lines. Areas of the Town (and County) were without power for a week.	temperatures. 2 frozen pipes in residences resulting in some damage.
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 Marletown, 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 incur any additional damages.
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 Town did not incur any additional damages.

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 Lloyd'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 Lloyd. The Town of Lloyd 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 confirmed with the rankings as presented in the table below.

Table 9.10-14. Hazard Ranking Input

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

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 9.10-15. 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		
Eltings Corners Facility	Tier II Facility	X	X	2024-Town of Lloyd-013	-
Highland Fire District Station 2	Fire Station	-	X	2024-Town of Lloyd-013	-
NY5521946	Potable Water Treatment Plant	X	X	2024-Town of Lloyd-013	-

Source: Ulster County, GIS 2023

Identified Issues

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

- There is increasing sediment accumulating in Shantz's Pond on the south branch of the Twaalfskill and in Pratt Mill Pond as well as a few others located along the North Beach Twaalfskill which limits stormwater detention volume, further leading to increased flooding along and over roadways in the area of the Hamlet of Highland and along River Road. These areas are along private properties.
- There is no backup power at the Highland Water Treatment Plant or the Hudson River Pump Stations so during an outage, these facilities cannot perform continuity of operations.
- River Road located by the old power plant washes out and has started to slide which prevents access to the water treatment plant.
- A streambank runs behind the wastewater treatment plant along private properties and threatens the structure of the wastewater treatment plant.
- The Town does not have designated Red Cross shelters with backup generators to protect residents during hazard events.
- The Town does not have an updated Emergency Management Plan that integrates the hazards of concern and coincides with the County plan.
- The Town is not apart of the Countywide IPAWS system which provides emergency alerts and hazard related warnings to affected municipalities.
- The Town does not have anyone that is trained to deal with hazardous material spills.
- The Town suffers from numerous power outages which limits continuity of operations for the Town.
- 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 three repetitive loss and one severe repetitive loss properties. Many of these 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:
 - Eltings Corners Facility
 - Highland Fire District Station 2
 - Potable Water Treatment Plant: NY5521946
- 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.*

9.10.6 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 9.10-16. 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	Dredge and clean Shantz's Pond on the south branch of the Twaalfskill to increase storm water detention volume to reduce flooding along and over roadways in the area of the Hamlet of Highland and along River Road. It is privately owned.	Flood	Creek runs through the Hamlet. Not regulated.	Highway Department and Town Engineers	No Progress	Level of Protection		<ol style="list-style-type: none"> Include in the 2024 HMP Applying for permanent maintenance easement for this private property -
2	Dredge and clean ponds (Pratt Mill Pond and others) along the North Beach Twaalfskill to increase storm water detention volume to reduce flooding along and over roadways in the area of the Hamlet of Highland and along River Road	Flood	There is increasing sediment accumulating in Shantz's Pond on the south branch of the Twaalfskill and in Pratt Mill Pond as well as a few others located along the North Beach Twaalfskill which limits stormwater detention volume, further leading to increased flooding along and over roadways in the area of the Hamlet of Highland and along River Road. These areas are along private properties.	Highway Department, Town Engineers	No Progress	Level of Protection		<ol style="list-style-type: none"> Include in the 2024 HMP Applying for permanent maintenance easement for this private property. -
3	Dredge and clean unnamed stream along Mile Hill Road and construct a detention pond on the Alfonso	Flood, Utility Failure	There is increasing sediment accumulating along Mile Hill Road.	Highway Department, Town Engineers	Complete	Level of Protection		<ol style="list-style-type: none"> Discontinue - Noted area has been completed.



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.
	property to reduce flooding and washouts along Mile Hill Road, to protect regional high pressure gas main serving Dutchess County and to protect major water mains serving the Hamlet of Highland.					Evidence of Success		
4	Dredge and remove the sediment in both branches of the Twaalfskill as well as removal of the alluvial deposit at the Twaalfskill outlet in the Hudson River to reduce flooding of the adjoining properties.	Flood	There is increasing sediment accumulating in both branches of the Twaalfskill as well as removal of the alluvial deposit at the Twaalfskill outlet in the Hudson River.	Highway Department, Town Engineers	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2. -
						Damages Avoided; Evidence of Success		3. Project work completed in 2012. We continue to re-visit and monitor annually for changes that need to be addressed.



Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.10-16, the Town of Lloyd identified the following mitigation efforts completed since the last HMP:

- None Identified

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

- None Identified

Proposed Hazard Mitigation Initiatives for the HMP Update

The Town of Lloyd 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 9.10-17. 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	-	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	X	X
Hazardous Materials	X	X	-	X	X	-	X	-	X	X
Landslide	X	X	-	X	X	-	X	-	X	X
Pandemic	X	X	-	X	X	-	X	-	X	X
Severe Storm	X	X	X	X	X	-	X	X	X	X
Severe Winter Storm	X	X	X	X	X	-	X	X	X	X
Utility Failure	X	X	-	X	X	-	X	-	X	X
Wildfire	X	X	-	X	X	-	X	-	X	X

Note: Mitigation categories are described below the Mitigation Initiatives Table (Table 9.10-18).

The table below summarizes the specific mitigation initiatives the Town of Lloyd 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 9.10-18. 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 Lloyd-001	Dredge and clean Ponds along the Twaalfskill	4	Flood, Severe Storm, Severe Winter Storm	Problem: There is increasing sediment accumulating in Shantz's Pond on the south branch of the Twaalfskill and in Pratt Mill Pond as well as a few others located along the North Beach Twaalfskill which limits stormwater detention volume, further leading to increased flooding along and over roadways in the area of the Hamlet of Highland and along River Road. These areas are along private properties. Solution: The Town will obtain permanent maintenance easements for the private properties and will obtain funding to dredge and clean ponds out to increase stormwater detention to limit flooding issues and will continue to monitor the status of the ponds.	No	No	Less than 5 years	Highway Department, Town Engineers	>\$50,000 per pond	Larger stormwater retention body	BRIC, HMGP, Sewer Overflow and Stormwater Reuse Municipal Grant (OSG)	High	NSP	NR
2024-Town of Lloyd-002	Generators for Critical Facilities	2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: There is no backup power at the Highland Water Treatment Plant or the Hudson River Pump Stations so during an outage, these facilities cannot perform continuity of operations. Solution: The engineering study is complete for both critical facilities. The Town will obtain funding for the generators and installation of the generators and will perform routine maintenance on them.	Yes	No	Less than 5 years	Public Works, Engineer	\$100,000 per generator	The Highland Water Treatment Plant and the Hudson River Pump Stations will be able to perform continuity of operations during power outages.	HMGP, BRIC, Town Budget	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
2024-Town of Lloyd-003	River Road	2	Flood, Landslide, Severe Storm, Severe Winter Storm	Problem: River Road located by the old power plant washes out and has started to slide which prevents access to the water treatment plant. Solution: The Town will conduct a study to determine how to prevent River Road from flooding and sliding to ensure that access to the water treatment plant is available at all times.	Yes	No	Less than 5 years	Engineering, Public Works	TBD after Study	The Town will be able to access the water treatment plant at all times.	BRIC, HMGP, FMA	High	SIP	SP
2024-Town of Lloyd-004	Harden Sewer Treatment Plant	2	Flood, Landslide, Severe Storm, Severe Winter Storm, Wildfire	Problem: A streambank runs behind the wastewater treatment plant along private properties and threatens the structure of the wastewater treatment plant. Solution: The Town will conduct a study after obtaining private property easements on how to properly strengthen the streambank and harden the wastewater treatment plant structure to limit the effects of hazards on the plant.	Yes	No	Less than 5 years	Engineering, Public Works, Private Property Owners	TBD after study	The Town wastewater treatment plant will be strengthened against hazard events.	BRIC, HMGP, FMA	High	SIP	SP
2024-Town of Lloyd-005	Red Cross Shelters and Generators	1, 2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure,	Problem: The Town does not have designated Red Cross shelters with backup generators to protect residents during hazard events. Solution: The Town will work with the County in order to get the Legion and St. Augustine buildings to become Red Cross certified and will obtain funding for generators and installation after an engineering study is conducted. The Town will perform routine maintenance on the facilities and the generators to keep them ready for an emergency at all times.	Yes	No	Less than 5 years	Engineering, Public Works, County Emergency Manager	\$100,000 per generator	The Town will be able to protect their residents during hazard events.	HMGP, ESG	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
2024-Town of Lloyd-006	Update Emergency Management Plan	2	Wildfire Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town does not have an updated Emergency Management Plan that integrates the hazards of concern and coincides with the County plan. Solution: The Town will integrate the HMP and County Emergency Management Plan into their own Town Emergency Management Plan and will coordinate information with the County.	No	No	Less than 2 years	Planning Board, County Emergency Manager	Staff Time	The Town will have an up-to-date Emergency Management Plan.	Town Budget	High	LPR	ES
2024-Town of Lloyd-007	Join County IPAWS warning system	1, 2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	Problem: The Town is not a part of the Countywide IPAWS system which provides emergency alerts and hazard related warnings to affected municipalities. Solution: The Town will join the IPAWS system and will coordinate with the County when Town specific alerts need to be sent out and the County will geofence the area and ensure necessary alerts are sent out.	No	No	1 Year	County Emergency Manager, Planning Board	None	Town residents will be more prepared for hazard events	Town and County Budget	High	EAP	ES, PI
2024-Town of Lloyd-008	Haz Mat Training	2, 3	Hazardous Materials	Problem: The Town does not have anyone that is trained to deal with hazardous material spills.	No	No	1 Year	County Emergency Manager, Planning Board	Staff Time	The Town will be better prepared to handle HazMat spills	Town and County Budget	High	EAP	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
				Solution: The Town will provide training to staff from the County Hazmat team so that they have trained staff in the Town to assist the County with hazmat spills in the Town.										
2024-Town of Lloyd-009	Study to Bury Powerlines	2	Utility Failure	<p>Problem: The Town suffers from numerous power outages which limits continuity of operations for the Town.</p> <p>Solution: The Town will conduct a feasibility study to determine if burying powerlines in some regular outage areas would be cost effective. If the feasibility study determines that burying any powerlines would be cost effective and feasible, then the Town will acquire funding to bury the powerlines.</p>	No	No	Less than 5 years	Public Works, Engineering	TBD after feasibility study	The Town will experience less power outages.	HMGP, BRIC, Town Budget	High	SIP	SP
2024-Town of Lloyd-010	Cell Tower Installation	2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	<p>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.</p> <p>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</p>	Yes	No	Less than 5 years	Public Works, Engineering, Ulster County	TBD after the study	The Town will be able to communicate with emergency responders and other municipalities.	HMGP, BRIC	High	SIP	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
				receive emergency notification warnings to their cell phones.										
2024-Town of Lloyd-011	Radio Towers	2	Dam Failure, Drought, Extreme Temperature, Flood, Hazardous Materials, Landslide, Pandemic, Severe Storm, Severe Winter Storm, Utility Failure, Wildfire	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. 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.	Yes	No	Less than 5 years	Engineering, Public Works, Ulster County	TBD after study	Better communication for emergency responders.	HMGP, BRIC	High	SIP	ES
2024-Town of Lloyd-012	Repetitive Loss Mitigation	2	Flood, Severe Storm, Severe Winter Storm	Problem: The Town has three repetitive loss and one severe repetitive loss properties. Many of these 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. 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	No	No	Less than 5 Years for Outreach	Floodplain Administrator, Public Works, Engineering, Property Owners	TBD after mitigation measure is identified	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	FEMA HMGP and FMA, BRIC, local cost share by residents	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
				acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).										
2024-Town of Lloyd-013	Critical Facilities Flood Protection	1, 2	Flood	<p>Problem: The following critical facilities are municipally owned and located in the special flood hazard area:</p> <ul style="list-style-type: none">• Eltings Corners Facility• Highland Fire District Station 2• Potable Water Treatment Plant: NY5521946 <p>Solution: The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at affected 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>	Yes 💧	No	Within 5 Years	Floodplain Administrator, Public Works, Engineer	TBD by feasibility assessment	Ensures continuity of operations of impacted critical facilities	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	High	SIP	SP
2024-Town of Lloyd-014	Crop Loss Insurance Outreach	1, 2, 3, 4	Flood, Drought, Extreme Temperature, Severe Storm, Severe Winter Storm	<p>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.</p> <p>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.</p>	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 9.10-19. 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 Lloyd-001	Dredge and clean Ponds along the Twaalfskill	1	1	1	1	1	1	0	1	1	0	1	1	0	0	10	High
2024-Town of Lloyd-002	Generators for Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-003	River Road	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-004	Harden Sewer Treatment Plant	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-005	Red Cross Shelters and Generators	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-Town of Lloyd-006	Update Emergency Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2024-Town of Lloyd-007	Join County IPAWS warning system	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2024-Town of Lloyd-008	Haz Mat Training	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2024-Town of Lloyd-009	Study to Bury Powerlines	1	1	0	1	1	1	0	0	1	1	0	1	1	1	10	High
2024-Town of Lloyd-010	Cell Tower Installation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-011	Radio Towers	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-012	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Town of Lloyd-013	Critical Facilities Flood Protection	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	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 Lloyd-014	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).