

10.2.41 Village of Woodbury

This section presents the jurisdictional annex for the Village of Woodbury.

10.2.41.1 Contacts

Primary and secondary contacts regarding this plan are identified as follows:

- Robert Weyant – Village Highway Superintendent
P.O. Box 546
Central Valley, NY 10917
(845) 928-7558
- Neil Crouse – Village Trustee
(845) 928-7558
- Michael Queenan – Mayor
P.O. Box 546
Central Valley, NY 10917
(845) 928-7558

10.2.41.2 Municipal Profile

Population

The 2010 census data reveals the Town’s population as ten thousand, six hundred eighty-six (10,686). This is an increase of 1.2% since the 2000 census of nine thousand (9,000).

Location

The Village of Woodbury is located in the southeastern portion of Orange County. Bordering municipalities include the Town of Cornwall to the north, the Town of Blooming Grove to the northwest, the Town of Monroe to the west, the Town of Tuxedo to the south, and the Town of Stony Point (Rockland County) to the southeast. A small portion of the Town of Woodbury is part of the Village of Harriman while the remainder of the Town is coterminous with the Village of Woodbury.

Brief History

Originally an agriculturally based town, the Village of Woodbury is known as the “gateway to Orange County” for its geographic location. Known as Smithfields in 1790, the area also boasted grist and flour mills as well as tanneries. Created due to the division of the Town of Monroe in 1863, this vote was rescinded two (2) years later. In 1889, the Town of Woodbury was again divided and has been its own entity since.

In 2006, the Village of Woodbury became incorporated. The Village encompasses all the land of the Town of Woodbury except for the portion that is located within the Village of Harriman. Since its creation, the Village of Woodbury has taken over all planning and zoning functions from the Town and is responsible for the shared Village Highway Department. The Town has retained ownership of its highway, water, and sewer infrastructure since the Village's creation. The Village and Town work together to identify projects that are mutually beneficial to both municipal boards and, thus, have proposed the same mitigation actions.

Before the Village's establishment, the Town was known as a bedroom community for New York City (located just forty-five (45) miles away). The Village is now known as the host community for Woodbury Commons Premium Outlets (shopping, retail, and dining facility).

Governing Body

The Village is served by the Mayor, a Deputy Mayor, and three (3) Trustees - all elected positions. The Village Mayor runs the day-to-day operations of the Village of Woodbury.

Future Growth

The development of Woodbury Commons, a shopping center, in the mid-1980s has led to steady growth for the Village as it has become a destination. Of the residentially zoned area, over two-thirds of the Village is zoned as Residential Three (3) Acre, keeping the trend of low density housing. Only 1.5% and 1% of the land is zoned for commercial and industrial uses, respectively.

10.2.41.3 Hazard Vulnerabilities and Ranking

Risk Ranking

The following scale was developed to determine hazard vulnerability for the jurisdiction. Each event was given a ranking from one (1) through three (3) for the severity of impact based on extent, onset warning, impact in damages and injury, and frequency. Three (3) represents the greatest impact (large area, no warning, severe damage, and regular occurrence), two (2) represents moderate impact (several locations, hours of warning, moderate damage, and infrequent occurrence), and one (1) represents low impact (one location, days of warning, minor damage, and rare occurrence).

Hazard Event	Extent	Onset	Impact (Damages and Injury)	Frequency	Vulnerability
Flood	3	1	3	3	High
Winter Storm	3	1	1	3	Moderate
Hurricane	3	1	3	2	High
Earthquake	3	3	3	2	High

Landslide	1	3	2	1	Moderate
Tornado	1	3	3	1	Moderate
Fire	2	1	2	1	Low
Dam Failure	1	3	3	1	Moderate

Critical Facilities

Critical facilities are defined as any facility that is critical for emergency response or that requires special emergency response in the event of hazardous incidents as identified by the Village of Woodbury.

The tables below denote the number and location of these CFI's.

Table 10.2.41b: Location of CFI in the Village of Woodbury	
Facility Name	Address (Street, Town/Village/Hamlet)
Transportation Network	
Evacuation Routes	-
Bridges	-
Water Supply Systems	
(2) Earl Reservoir Dam / Amdur Park Lake	Schunemunk Road
Cromwell Lake Dam	Bennington Drive
Saltzman's Lake Dam	Vanderbilt Drive
Coronet Lake Dam	Acres Road
(4) Well House 1-3, 6	Adams Street
Well House 5	Pine Hill Road
(2) Storage Tanks	Summit Avenue
Water Tank	Overlook Drive
Weygant Hill Water Tank	Fillmore Court
Earl Reservoir Water Tank	Sid Felter Lane
Skyline Water Tank	Elmwood Drive
Amdur Park Water Plant	Schunemunk Road
Water Pump Station	Townsend Avenue
Weygant Hill Pump Water Station	Fillmore Court
Birchwood Drive Water Pump Station	Woodland Drive
Sewage Pump Station	Smith Clove Road
Sewage Pump Station	Hollet Avenue
Sewage Pump Station	Sunset Avenue
Sewage Pump Station	Pine Hill Road
Sewage Pump Station	Pearce Drive
Sewage Pump Station	Bond Street
Valley Forge WWTP	Washington Drive

Table 10.2.41b: Location of CFI in the Village of Woodbury	
Facility Name	Address (Street, Town/Village/Hamlet)
Government Services	
Town Hall	511 NYS Route 32
Highway Department	24 County Route 105
Town Fuel Depot	24 County Route 105
Salt Storage Shed	24 County Route 105
Emergency Services	
Police Department	386 NYS Route 32
Central Valley Fire Station	Smith Clove Road
Highland Mills Fire Station	NYS Route 32
Community Ambulance	376 NYS Route 32
Educational/ Shelter and Evacuation Facilities	
Education Center	278 NYS Route 32
Monroe-Woodbury High School	155 Dunderberg Road
Middle School	199 Dunderberg Road
Central Valley Elementary School	45 NYS Route 32
Smith Clove Elementary School	21 Smith Clove Road

While it is assumed that most municipal water systems facilities are not located within the floodplain, the Village will explore hardening/relocation opportunities for those that are located within the floodplain should such actions become necessary due to the incidence of flooding impacts.

By necessity, critical wastewater facilities are located within the 500-year floodplain due to discharge requirements and gravity-fed systems optimization. While relocation is neither desired nor feasible, the Village will seek to harden these facilities where feasibly and fiscally possible.

The Village of Woodbury has an additional six (6) facilities that could be considered critical located within the 500-year floodplain or the high hazard Landslide Rating¹ area. Below is a table that identifies the structure and hazard issues. The responsibility for these sites rests with the Town via the joint Town/Village Highway Department.

Table 10.2.4c: Village of Woodbury Critical Facilities and Infrastructure in Hazard Areas			
Critical Infrastructure	500-Yr Flood	Landslide Rating Area	Associated Mitigation Action
Woodbury Pond 4	Y	N	N/A
Dunderberg Manor – Bond Retention Pond Dam	Y	N	N/A
Koppel & Ostrow Dam	N	Y	N/A

¹ Areas with a landslide rating in of greater than 37 are considered hazardous. The data was derived from HAZUS software analysis.

Table 10.2.4c: Village of Woodbury Critical Facilities and Infrastructure in Hazard Areas			
Critical Infrastructure	500-Yr Flood	Landslide Rating Area	Associated Mitigation Action
Lake Te-ata Dam	Y	N	N/A
Massawippa Lake Dam	Y	N	N/A
Ralph Ogden Reservoir Dam	Y	N	N/A

Priority Hazard Events

The following sections detail the priority hazard events identified by the jurisdiction. Additional information about each hazard including frequency, history, and severity within Orange County is included within Section 5.0 of the main body of the Hazard Mitigation Plan (Volume I).

The probability of climate-related hazard events is generally expected to increase in the future within the Village of Woodbury. This anticipated increase results from the expected increase in weather volatility associated with climate change. Upstream tributaries such as the Moodna Creek and Ramapo River Watersheds will also experience increased flooding occurrences.

Past occurrences of hazard events are indicated in their respective profiles below. Some hazards may not have locally available documentation of past occurrence, but are nonetheless profiled in this annex to instill future mitigation planning consideration.

Flood

Two watersheds impact the hydrology in the Village of Woodbury; the Hackensack-Passaic and the Hudson-Wappinger. Within the Village, the north and central portions drain into Woodbury Creek, situated in a north-south direction along the eastern edge of the Village. Drainage from the south end of Village goes into the Ramapo River and the eastern end of Village drains into the Hudson River.

FEMA’s Flood Insurance Mapping Program designates areas that are at risk for flooding; low flood risk are areas unlikely to flood, moderate risk are areas within the 500-year floodplain (0.2% likely to flood in any given year), and high risk are areas that frequently flood, up to the 100-year flood risk zone (1% likely to flood in any given year).

Table 10.2.41d: Summary of Land Areas in Flood Hazard Areas (Source: HAZUS, FEMA DFIRM Data)			
Total Land Area (Acres)	100-yr Flood Risk Area	500-yr Flood Risk Area	Low Risk Flood Area
23,444	771 (3%)	79 (0%)	22,594

Additionally, 4.2% of the Village’s improved value areas (defined as property that is either actively utilized or has been developed) are located within the high or moderate risk flood areas (95.8% is within low risk areas).

Historical Occurrence:

There have also been numerous other events that have impacted the Village, albeit on the county-wide scope such as flooding cause during Hurricanes Irene and Sandy and Tropical Storm Lee.

Vulnerable locations within the Village include:

- Park Avenue – Drainage flows to Tributary 7 of Woodbury Creek; the majority of storm runoff from the Town collects and produces significant volume at this location; January 1996 saw the failure of the Hollis Street Bridge at Park Avenue. This remains a potential for future heavy rain events.
- Plum Court – Private road leading to developed condominiums. The area has a history of inundation of the drainage swales during heavy storm events due to runoff and debris.
- Public Water Supply – Well House 1, 2, and 3 were all installed at grade in the 100-year floodplain. Post Hurricane Floyd, the Town was able to relocate Well Houses 2 and 3 above the floodplain; Well House 1 still remains vulnerable to flooding.

The following table illustrates the value of property in the Village of Woodbury that is located within the 500-year floodplain and is categorized by land use type. This table was derived from FEMA floodplain mapping and parcel data from the Orange County Property Assessor.

Type of Structure	# Structures in Hazard Area	Value of Structures (in millions)
Residential	400	\$40.0
Commercial	80	\$25.0
Industrial	1	\$2.0
Agricultural	0	\$0
Religious/Non-profit	0	\$0
Government	1	\$0.7
Education	1	\$5.0
Utilities	1	\$2.0
Dams	4	Unknown
Parks	0	\$0
Total	488	\$74.7

Tornado

For a description of this hazard, please see section 5.2.

Historical Occurrence:

In the past ten (10) years there is no record of any tornados that have explicitly impacted the Village of Woodbury. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

Hurricanes/Tropical Storms

For a description of this hazard, please see section 5.3.

Historical Occurrence:

In the past ten (10) years there is no record of any hurricanes that have explicitly impacted the Village of Woodbury. However, there have been a number of recorded occurrences within Orange County such as Irene, Lee, and Sandy. The information can be found in the main body of the document.

Landslide

Landslides occur when a slope fails and moves downward due to gravity; this can be caused by anything that disrupts ground stability, from storms to acts of man. The New York State Geological Survey denotes areas with steep slopes and glacial lake clay soils. Within the Town of Woodbury, areas of steep slopes are generally confined to West Point and the Harriman State Park, which will not be subject to development.

The majority of the Village remains within “low incidence” for landslides. The only areas of high landslide risk are located in the northeastern part of the Village on the steep slopes to the east of the NYS Thruway and along the Woodbury Creek and Mineral Spring Brook. Analysis of critical facilities that fall into these high landslide rating areas can be found in Table 10.2.4c and in Attachment I.

Below is a table that illustrates the value of property in the Village of Woodbury that is located within the landslide rating area and is categorized by land use type. This table was derived from GIS mapping and parcel data from the Orange County Property Assessor.

Type of Structure	# Structures in Hazard Area	Value of Structures (in millions)
Residential	400	\$40.0
Commercial	80	\$25.0
Industrial	1	\$2.0
Agricultural	0	\$0
Religious/Non-profit	0	\$0
Government	0	\$0
Education	1	\$5.0
Utilities	1	\$2.0
Dams	1	Unknown
Parks	0	\$0
Total	484	\$74.0

Earthquake

Earthquakes can result in mass damage depending on severity; they also lack much forewarning. According to the USGS Seismic Hazard Map for Percent Peak Acceleration, the Village of Woodbury is shown as being at higher seismic risk than the majority of municipalities within New York State.

The Ramapo Fault Zone spans one hundred and eighty-five (185) miles between the Northern Appalachian Mountains in the east through New York, New Jersey, and Pennsylvania. Earthquakes in this region rarely exceed 3.0 on the Richter Scale.

Historical Occurrence:

The most recent earthquake event occurred on April 20, 2003. Measuring 2.3 on the Richter scale, no major damages were reported. The area may expect to experience a damaging earthquake event once every twenty-two (22) years.

Severe Winter Storm

For a description of this hazard, please see section 5.8.

Historical Occurrence:

In the past ten (10) years there is no record of any severe winter storms that have explicitly impacted the Village of Woodbury. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

Wildfire

The Federal Emergency Management Agency separates wildfires into two (2) occurrences:

- Wildland Fire – Occurs where there is little development.
- Wildland Urban Interface Fire – Occurs where structures and development interface with wildland/ fueling vegetation.

The Village of Woodbury has seen an increased trend in residences situated in areas adjacent to or within forested areas, increasing vulnerability to this hazard. For more on this vulnerability, see Section 5.9 of this plan, located in Volume I.

Historical Occurrence:

In 1988, five thousand (5,000) acres were burned on Bear Mountain due to little rainfall during the month of July. Statewide, low humidity and high temperatures contributed to five hundred fifty-one (551) wildfire events in 1991. No wildfire events have occurred within the Village of Woodbury in the past ten (10) years.

Dam Failure

Dam failures can be attributed to natural or man-made hazards. The impoundment of large volumes of water poses a threat; the failure of a dam can lead to catastrophic flooding.

The New York State Department of Environmental Conservation (NYSDEC) maintains a database to classify dams based on the event of a failure. Explanations of dam classifications are noted in the table below.

NYSDEC Classification	Description
Class "A" or "Low Hazard"	A dam failure is unlikely to result in damage to anything more than isolated or unoccupied buildings, undeveloped lands, minor roads such as town or country roads; is unlikely to result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; and/or is otherwise unlikely to pose the threat of personal injuring, substantial economic loss or substantial environmental damage.
Class "B" or "Moderate Hazard"	A dam failure may result in damage to isolated homes, main highways, and minor railroads; may result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; and/or is otherwise likely to pose the threat of personal injury and/or substantial economic loss or substantial environmental damage. Loss of human life is not expected.
Class "C" or "High Hazard"	A dam failure may result in widespread or serious damage to home (s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such as the loss of human life or widespread substantial economic loss is likely.
Class "D" or "Negligible or No Hazard"	A dam that has been breached or removed, or has failed or otherwise no longer materially impounds waters, or a dam that was planned but never constructed. Class "D" dams are considered to be defunct dams posing negligible or no hazard. The department may retain pertinent records regarding such dams.

Within the Village of Woodbury, the Earl Reservoir Dam is classified as a Class “C” dam. Located along Schunemunk Road, the dam impounds the one hundred eighteen (118) acre-feet reservoir that serves as a recreational destination for swimming, fishing, and boating. The dam has a length of four hundred sixty (460) feet and is twenty-six (26) feet high, for a capacity of one hundred seventy-two (172) acre-feet. The dam itself is considered earthen, though does contain concrete structures. This dam is owned by the Town of Woodbury who shares responsibility for maintenance and upkeep. An Emergency Action Plan (EAP) was developed by the Town at the request of the NYSDEC.

Should the dam fail, the majority of structures affected would be single family residences. These seventy-five (75) structures within the potential inundation area are estimated to have a combined value of \$28 million.

10.2.41.4 Capability Assessment

Planning and Regulatory Capability

Table 10.2.41h: Legal and Regulatory Capabilities for Town of Woodbury		
Regulatory Tools for Hazard Mitigation	Description	Responsible Department/Agency
Codes and/or Ordinances	<ul style="list-style-type: none"> • 2010 Residential Code of NYS • 2010 Fire Code of NYS • 2010 Building Code of NYS • 2010 Exiting Building Code of NYS • 2010 Energy Conservation Construction Code of NYS • 2010 Plumbing Code of NYS • 2010 Mechanical Code of NYS • 2010 Fuel Gas Code of NYS 	Village Building Department
	<ul style="list-style-type: none"> • Floodplain/Natural Hazard Ordinance • Zoning Ordinance • Subdivision Ordinance • Acquisition of Open Space/Public Recreation uses 	Village Planning Board
Plans, Manuals, and/or Guidelines	<ul style="list-style-type: none"> • Stormwater Management MS4 • Village of Woodbury Comprehensive Plan 2011 • Capital Improvements Plan • Local Emergency Operations Plan 	Village Planning Board
Studies	<ul style="list-style-type: none"> • FIRM Flood Insurance Rate Maps, 2009 • Fire Department Rating- 03/3Y 	<ul style="list-style-type: none"> • Village Board / Village Building Department • ISO – Village Board / Village Fire Department

Administrative and Technical

Table 10.2.41i: Summary of Administrative and Technical Staff Capabilities for Town of Woodbury		
Staff/Personnel Resources	<input checked="" type="checkbox"/>	Capability/Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	<input checked="" type="checkbox"/>	Village Consultant Engineer, Village Planning Board Consultant Planner
Mitigation Planning Committee	<input checked="" type="checkbox"/>	Village Mayor, Village Board, Village Highway Superintendent, Village Consultant Engineer
Chief Building Administrator	<input checked="" type="checkbox"/>	Village Building Inspector
Floodplain Manager/Administrator	<input checked="" type="checkbox"/>	Village Building Inspector
Civil Engineer	<input checked="" type="checkbox"/>	Village Consultant Engineer
Community Planner	<input checked="" type="checkbox"/>	Village Planning Board, Village Planning Board Consultant Planner
Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS	<input checked="" type="checkbox"/>	Village Consultant Engineer
Emergency manager	<input checked="" type="checkbox"/>	Town Police Chief, Village Fire Chief
Grant writer(s)	<input checked="" type="checkbox"/>	Various Village Officials, Village Consultant Engineer
Planning Commission	<input checked="" type="checkbox"/>	Village Planning Board, (Review Application, site plans, subdivision and special permits)
Maintenance Programs	<input checked="" type="checkbox"/>	Village Highway Department, Village Water/Sewer Department, NYSDOT
Mutual Aid Agreements	<input checked="" type="checkbox"/>	Mutual aid with all neighboring municipalities

Fiscal

Table 10.2.41j: Fiscal Opportunities for Town of Woodbury		
Financial Resources	Accessible or Eligible to Use (Yes, No, Don't Know)	Comments
Community Development Block Grants	Yes	Used for Storm Mitigation Requests and various projects
Capital Improvements Project funding	Yes	Various project
Authority to levy taxes for specific purposes	Yes	Various projects
Fees for water, sewer, gas, or electric service	Yes	Water and sewer projects
Impact fees for homebuyers or new developments/homes	Yes	Streets, water and sewer projects

Incur debt through general obligation bonds	Yes	Various projects
Federal/State Funding	Yes	Various grants

NFIP: Administrator, Vulnerability, Resources, Compliance

As of January 31, 2018, the Village of Woodbury has sixty-one (61) NFIP policies, insuring a value of \$16,456,700. Forty-five (45) claims have been paid for a total cost of \$581,830.21. According to Table 8.2c, there is one (1) repetitive loss property located within the Village of Woodbury which is not considered to be a severe repetitive flood loss property. More information on the Village's NFIP data can be found in Section 8.2.

The Village Building inspector is the current Floodplain Administrator; there have been no compliance issues to date. The Village has been maintaining NFIP participation by performing the duties and actions that were listed in the local laws that their municipal boards adopted (Town of Woodbury Local Law #3 of 1987).

The Village of Woodbury was incorporated in 2006 and covers all of the Town of Woodbury except for a portion within the Village of Harriman. On incorporation, the Village of Woodbury assumed the Town's obligations and authority over local building and zoning, as well as the administration of the Floodplain Management Ordinance and other responsibilities associated with NFIP membership.

The Village Floodplain Administrator has been provided an NFIP best practices guidance package and will be using it to improve local participation in NFIP standards going forward. This package of documents was provided by NYSDHSES and can be found in Appendix F - NFIP Floodplain Administrator Guidance Package.

Hazard Mitigation: Existing and Planning Mechanisms

Emergency Communications, Routes, and Shelters:

The Town and Village of Woodbury, along with Orange County, utilize the CodeRED emergency communications system. The Village follows emergency route rules set by Orange County. The Village of Harriman, Town of Woodbury and Village of Woodbury all share emergency shelter resources. The partnership has three (3) designated emergency shelters: Town of Woodbury Senior Center (24 County Rt. 105, Highland Mills, NY 10930), Village of Woodbury Village Hall & Highland Mills Firehouse NYS 455 Rt. 32, Highland Mills, NY 10930, and Monroe-Woodbury Senior High School (199 Dunderberg Rd., Central Valley, NY 10917). More information on these sites can be found in Attachment III.

Comprehensive Plan:

The Village Comprehensive Plan was adopted in 2011. It does not include project plans for mitigation and cannot be used to implement them.

Planning Mechanisms:

While this annex has provided a summary and description of existing plans, policies, and regulatory mechanisms that support hazard mitigation, the 2018 Orange County Hazard Mitigation Plan Update is intended to allow for the integration of its recommendations and data into local plans. Listed below are several planning and policy mechanisms that lend themselves to the integration of materials and objectives from this hazard mitigation plan. Columns to the right indicate whether the municipality has utilized hazard mitigation planning elements in the past (as in the aftermath of a previous local hazard mitigation plan) and whether they intend to be utilized in the future (which most, if not all, do).

Table 10.2.41k: Incorporation of Hazard Mitigation Planning into Existing and Future Planning Mechanisms		
Planning Mechanism	Has been Utilized	May be Utilized
Capital Improvement Budget: Hazard Mitigation Actions to be considered during the development of annual capital improvement plans. Compliance with Hazard Mitigation goals and objectives as well as the hazard vulnerability of site will be a consideration during the evaluation of infrastructure and facilities projects.	X	X
Operating Budget: Hazard Mitigation Actions to be considered within day-to-day operating budgets as funding permits.	X	X
Building & Zoning Ordinances: Review of the hazard mitigation plan and hazard analyses are part of the evaluation of land use, zoning, and development review ordinances and permitted processes.	X	X
Comprehensive Land Use Plan: Elements such as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.	X	X
Human Resource Manual: Employee job descriptions may contain elements related to hazard mitigation planning and associated recommendations.		X
Grant Applications: Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the hazard mitigation plan.	X	X
Fire Plan: Fire Plans for the municipality and local fire departments can utilize data and mapping in the hazard mitigation plan.	X	X
Local School Service Projects: Municipal officials and staff can explore the possibility of collaboration with local school districts to provide avenues for student community service projects as well as educational opportunities.		X
Economic Development: Local chambers of commerce and other economic development agencies can utilize the hazard mitigation plan to better inform new/expanding businesses in finding a location.		X

Summary

The existing Capital Improvements Plan, and Local Emergency Operations/ Continuity of Operations Plan do address hazards to the Village. This document will be used to further inform existing planning and code documents for the Village.

10.2.41.5 Mitigation Strategy and Prioritization

Past, Completed, and Ongoing Initiatives

The Town and Village identified several mitigation actions in its previous local hazard mitigation plan in 2008. However, none of these proposed actions were completed due to lack of funding. The Village's annex in this 2018 Orange County Hazard Mitigation Plan Update has identified a more-focused set of eight (8) proposed actions. As was previously mentioned, both the Village and Town of Woodbury are nearly coterminous and share numerous municipal services functions. The Town/Village proposed mitigation actions can be found in Table 10.2.411.

Proposed Initiatives

Table 10.2.41I: Mitigation Actions/Projects Identified by Town/Village of Woodbury				
Action ID	Hazard(s) Mitigated	Action	Involved Agency(ies)	Funding Source(s)
WO-1	Earthquake	Ensure up-to-date codes and enhance training for code enforcement staff	Town Board, Village Building Inspector, Town Consultant Engineer	HMGP and PDM Grants, Building Permit Fees
WO-2	Flood	Replace bottlenecks in stormwater system and raise stream banks along Woodbury Creek and its tributaries	Town Board, Village Board, Town Consultant Engineer	HMGP and PDM Grants
WO-3	Severe Storm	Removal of potential tree hazards and upgrade storm sewer systems for 100-yr storm Village-wide	Town Board, Village Board, Town Consultant Engineer	HMGP and PDM Grants
WO-4	Winter Storm	New salt storage barn at Village/Town Hwy Dept property	Town Board, Village Highway Department, Town Consultant Engineer	HMGP and PDM Grants
WO-5	Wildfire	Develop a wildfire lane and fire breaks between West Point and Town of Woodbury	Town Board, Village Fire Dept., Town Consultant Engineer, Village Planning Board, NYSDEC, USMA at West Point Garrison Commander	HMGP and PDM Grants, West Point and State Parks
WO-6	Extreme Temperatures	Install generators at Woodbury Senior Center to serve as emergency shelter	Town Board, Town Consultant Engineer, Town Parks and Recreation	HMGP and PDM Grants, West Point and State Parks
WO-7	Air Contamination	Create ordinances for transportation of hazardous and noxious products	Town Board, NYSDEC, NYSDOH, Town Consultant Engineer	HMGP and PDM Grants
WO-8	Dam Failure	Raise dam and replace spillway at Earl Reservoir	Town Board, Village Board, Town Consultant Engineer, Village Water Department	HMGP and PDM Grants

STAPLEE forms were completed for each of these actions. A table with these evaluations can be found in Attachment II of this jurisdictional annex.

“STAPLEE” refers to the following lenses of evaluation: social, technological, administrative, political, legal, economic, and environmental.

Future Needs

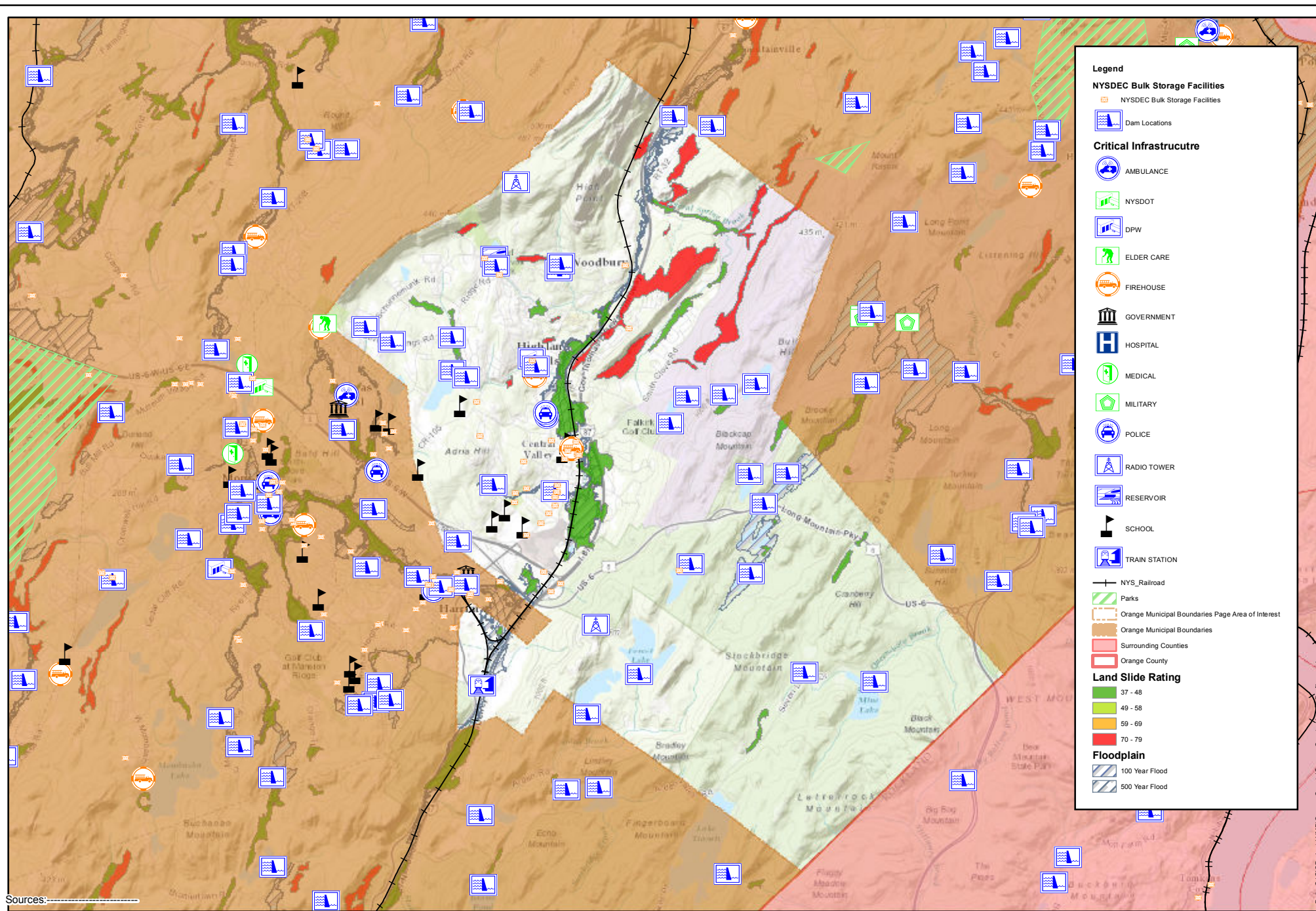
The Village has not identified any future needs.

10.2.41.6 Hazard Area Extent and Location

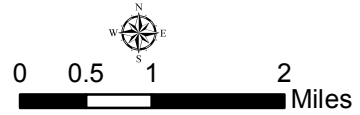
A map demonstrating the location of certain hazard areas is attached as Attachment I.

Attachment I

**Hazard Area Extent and Location Map -
Village of Woodbury**



Sources: _____



Path: C:\GIS\Projects\Orange County\Orange County Hazard Mitigation Plan\Map

Attachment II

STAPLEE Mitigation Action Cost/Benefit Analysis - Village of Woodbury

STAPLEE Criteria Consideration Tables
Mitigation Action Prioritization and Comparison

Jurisdiction:

Village of Woodbury

Action ID	Action	S	T	A	P	L	E	E	Can action be easily implemented?	Does action achieve multiple plan objectives?	Can action be quickly implemented?	Level of action benefits	Level of action overall costs	Priority ranking
		+ = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A											Levels = high, medium, or low	
WO-1	Drought Mitigation - Conservation emergency agreements with neighboring municipalities	0	+	+	0	+	0	+	-	0	+	Medium	Medium	Low
WO-2	Earthquake Mitigation - Ensure up-to-date codes and enhance training for code enforcement staff	0	+	+	+	+	0	+	0	+	0	Medium	Low	Low
WO-3	Flood Mitigation - Replace bottlenecks in stormwater system and raise stream banks along Woodbury Creek and its tributaries	+	+	0	+	+	-	+	-	+	-	High	Medium	High
WO-4	Severe Storm Mitigation - Removal of potential tree hazards and upgrade storm sewer systems for 100-yr storm Town-wide	+	+	0	+	+	-	+	0	+	0	Medium	Medium	Medium
WO-5	Drought Mitigation - Develop new wells	0	+	+	0	+	0	+	-	0	+	High	High	Low
WO-6	Severe Winter Storm Mitigation - New salt storage barn at Town Hwy Dept property	+	+	+	+	+	0	-	+	0	+	High	High	High
WO-7	Wildfire Mitigation - Develop a wildfire lane and fire breaks between West Point and Town of Woodbury	+	+	+	+	+	0	+	+	+	0	Medium	Medium	Medium
WO-8	Extreme Temperature - Install generators at Woodbury Senior Center to serve as emergency shelter	+	+	-	+	+	-	0	-	+	-	High	Medium	Medium
WO-9	Air Contamination Mitigation - Create ordinances for transportation of hazardous and noxious products	+	+	0	0	0	-	+	0	0	0	Medium	Medium	Low
WO-10	Dam Failure Mitigation - Raise dam and repace spillway at Earl Reservoir	+	+	+	+	+	0	+	0	+	-	High	High	Medium

Attachment III

**Hazard Mitigation Worksheets -
Village of Woodbury**

Mitigation Actions and Strategy Detail Worksheet

Action Worksheet	
Name of Jurisdiction	Town of Woodbury
Name of Hazard Mitigation Plan	Orange County Multi-Jurisdictional Hazard Mitigation Plan
Potential Actions/Projects (not being implemented at this time)	
Action/Project Number	WB – 4
Name of Action/Project	Salt Storage
Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered	New salt storage barn for Village Hwy Dept. located on Town of Woodbury property. \$2 million
Plan for Implementation	
Responsible Organization	Town Board, Village Highway Department, Town Consultant Engineer
Action/Project Priority	High
Potential Funding Sources	HMGP, PDM Grants
Other assisting organizations, entities, etc.	N/A
Local planning mechanisms to be used in project/action implementation, if any	The administration of this activity will be added to the Town's annual work schedule.
Progress Report	
Date of status report	
Report of progress	
Evaluation of effectiveness	

Mitigation Actions and Strategy Detail Worksheet

Action Worksheet	
Name of Jurisdiction	Town of Woodbury
Name of Hazard Mitigation Plan	Orange County Multi-Jurisdictional Hazard Mitigation Plan
Potential Actions/Projects (not being implemented at this time)	
Action/Project Number	WB – 6
Name of Action/Project	Installation of Generators
Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered	Install generators at Woodbury Senior Center to serve as emergency shelter. \$150,000.
Plan for Implementation	
Responsible Organization	Town Board, Town Consultant Engineer, Town Parks & Recreation
Action/Project Priority	High
Potential Funding Sources	HMGP & PDM Grants, West Point & State Parks
Other assisting organizations, entities, etc.	N/A
Local planning mechanisms to be used in project/action implementation, if any	None.
Progress Report	
Date of status report	
Report of progress	
Evaluation of effectiveness	

Orange County
Multi-Jurisdictional All Natural Hazard Mitigation Plan
Emergency Shelter Questionnaire

The three municipalities identified below are going to share facilities and resources in time of emergencies. Depending on the emergency situation one of the emergency shelters listed below will be opened for the general public.

Name of Your Municipality:	<u>1) Town of Woodbury</u>
	<u>2) Village of Woodbury</u>
	<u>3) Village of Harriman</u>
Common Name of Your Emergency Shelter:	<u>1) Town of Woodbury Senior Center</u>
	<u>2) Village of Woodbury Village Hall & Highland Mills Firehouse</u>
	<u>3) Monroe-Woodbury Senior High School</u>
Street Address of Your Emergency Shelter:	<u>1) 24 County Route 105, Highland Mills, NY 10930</u>
	<u>2) NYS 455 Route 32, Highland Mills, NY 10930</u>
	<u>3) 199 Dunderberg Rd, Central Valley NY 10917</u>
Name of the Owner of Your Emergency Shelter:	<u>1) Town of Woodbury</u>
	<u>2) Village of Woodbury</u>
	<u>3) Monroe Woodbury Central School District</u>
Name of the Regular Occupant of Your Emergency Shelter:	<u>1) Senior Center and Town Library</u>
	<u>2) Fire Department and Village Hall</u>
	<u>3) Monroe-Woodbury Senior High School</u>

Name of Jurisdiction: _____

**RESOLUTION
TO AUTHORIZE THE ACCEPTANCE AND ADOPTION OF THE
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE FOR
ORANGE COUNTY, NEW YORK**

WHEREAS, the Orange County Department of Emergency Services, with the assistance from Barton & Loguidice, D.P.C., has gathered information and prepared the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York; and

WHEREAS, the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York has been prepared in accordance with the Disaster Mitigation Act of 2000 and Title 44 Code of Federal Regulations (CFR), Part 201; and

WHEREAS, Title 44 CFR, Chapter 1, Part 201.6(c)(5) requires each local government participating in the preparation of a Multi-Jurisdictional Mitigation Plan or Plan Update to accept and adopt such plan; and

WHEREAS, the Village of Woodbury, has reviewed the 2016 Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, has found the document to be acceptable, and as a local unit of government, has afforded its citizens an opportunity to comment and provide input regarding the Plan Update and the actions included in the Plan;

WHEREAS, the Village of Woodbury, will consider the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County during the implementation and updating of local planning mechanisms, and will incorporate the hazard assessment data, hazard vulnerabilities, and mitigation actions in these mechanisms, where applicable;

NOW THEREFORE, BE IT RESOLVED, that the Village of Woodbury, as a participating jurisdiction, adopts the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York, dated May 2016.

This resolution was thereupon declared duly adopted on _____.

(Mayor)

(Clerk)