MULTI-JURISDICTIONAL

MULTI-HAZARD MITIGATION PLAN

VILLAGE OF WASHINGTONVILLE
JURISDICTIONAL ANNEX

IEM

2025
ORANGE COUNTY

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Village of Washingtonville Annex

This section presents the jurisdictional annex for the Village of Washingtonville. The jurisdiction's governing body passed a formal resolution to participate in this multijurisdictional hazard mitigation plan (MJHMP) update. A copy of their resolution is maintained at the local government offices and at the Orange County Emergency Services Center.

Contact Information

Table 1 provides the contact information for this plan.

Table 1: Jurisdiction's Points of Contact

Name	Title	Jurisdiction
Tom DeVinko	Mayor	Village of Washingtonville

Jurisdictional Profile

Population

The 2023 U.S. Census reported a population of 5,655 people (approximately 2,200 people per square mile) for the Village of Washingtonville, down from 5,737 (1.40%) in the 2020 census.

Location

The Village of Washingtonville is located in the central portion of Orange County and within the northern region of the Town of Blooming Grove. The village encompasses an area of 2.5 square miles and is located at the junction of State Routes 94 and 208.

Brief History

Washingtonville was first settled in 1731 and originally called Matthews Field. In 1818, the village was renamed in honor of President George Washington. The development of the New York, Lake Erie, and Western Railway prompted growth within the village during the mid-1800s. In 1895, the Village of Washingtonville was incorporated. The village also contains America's oldest winery, the Brotherhood Winery.

Governing Body

The Village of Washingtonville's governing body consists of a Village Mayor and a four-member Board of Trustees.

Growth and Development Trends

The Village of Washingtonville 2023 Comprehensive Plan for land use and zoning considerations has identified the following initiatives to decrease vulnerability to flooding and increase open spaces:

- Zoning map changes: Revised to reflect existing land uses where appropriate. For example, an area zoned R-M has been developed for single-family residential uses. The front of the parcels is in the R-100 zone, and the R-M zone essentially consists of wetland area on the back of the parcels, to be zoned R-100.
- Rezoning of open spaces: There are numerous properties owned by the Village of Washingtonville that form open spaces between residential neighborhoods, which will be considered for formal rezoning as open spaces. This will include any homeowner association lands set aside as open spaces or recreational areas for residential developments.
- Rezoning of manufactured homes: A large R-MHC zone, shown on Federal Emergency Management Agency (FEMA) maps as within the Moodna Creek floodway or within the 100-year floodplain, is to be rezoned. Given the flooding damage that has occurred to the mobile homes in Washingtonville Manor, Brookside Acres, and Silver Maples manufactured housing communities, some consideration will be given to eliminating any new housing from areas within the 100-year floodplain or floodway.[1]

A review of the planning board agenda from the Village of Washingtonville's municipal website indicates that there have been several planning board meetings held regarding future development. These projects include:

- Completion of drainage work on Emerson Drive and Seacord Lane (grant funded)
- Kings Capitol Construction Wastewater Treatment Plant (project funded at $174,858)
- Open bids for North Street drainage project
- Completed drainage project at 30 and 32 Decker Drive, Rera Court, Waterford Circle at Woodfield, and paving on Lincoln Drive
- Sewell Park Engineering floodplain management project
- MS-4 Engineering Storm Water Management project

Mitigation concerns have been addressed through site plan reviews and compliance with the village's comprehensive plan, local hazard mitigation plans, and local laws, policies, and procedures.

[1] Village of Washingtonville, 2024, "2023–2024 Comprehensive Plan Baseline Inventory and Analysis-Land Use and Zoning Considerations," https://www.washingtonville-ny.gov/wp-content/uploads/2024/03/2023-2024-Baseline-Inventory-and-Analysis.pdf

Redevelopment in hazard-prone areas will transition from industrial to residential/commercial uses over time and will also continue to follow local rules and regulations, New York State (NYS) building codes, New York State Department of Environmental Conservation (NYSDEC) stormwater management, and NYSDEC wetland protection regulations, as well as New York State Department of Transportation (NYSDOT) permitting.

Public Involvement

Continued public involvement is imperative to the overall success of the plan's implementation. The update process provides an opportunity to solicit participation from new and existing stakeholders, publicize mitigation success stories, and seek additional public comment. The plan maintenance and update process will include continued public and stakeholder involvement and input through attendance at designated committee meetings, web postings, press releases to local media, and public hearings.

Figure 1 displays how the public was encouraged to attend a public meeting at Orange County Emergency Services Center on November 21, 2024, as well as the survey used to gather information from the Village of Washingtonville's community members. The draft plan was posted on the jurisdiction's website for 30 days, where the village could solicit feedback from the public on a user-friendly form or survey.

Figure 1: Village of Washingtonville Public Invitation Outreach

Public Involvement Process for Annual Reviews

The public will be notified using the village's website or any other publicly accessible social platform (e.g., local newspaper, Facebook, X) well in advance of any public meetings or comment periods.

Public Involvement in Five-Year Updates

When the plan is ready for its five-year update, the jurisdictions will coordinate with all participating stakeholders. The jurisdiction will develop a plan for public involvement and be responsible for disseminating information through various media channels detailing the update process. As part of this effort, public meetings will be held and public comments will be solicited on the plan update draft.

Previous Plan Integration

Integration into Local Planning Mechanisms

Incorporating the underlying principles of the MJHMP and its recommendations into other plans is a highly effective and low-cost way to expand their influence. All plan participants will use existing methods and programs to implement hazard mitigation actions where possible. As previously stated, mitigation is most successful when incorporated into the daily functions and priorities of government and public service. This plan builds on the momentum developed through previous and related planning efforts and mitigation programs, and it recommends implementing actions, where possible, through these other program mechanisms. These existing mechanisms include:

- Regulatory capabilities
- Administrative capabilities
- Fiscal capabilities

Implementation and incorporation into existing planning mechanisms will be conducted by respective planning stakeholders and through the following routine actions:

- Monitoring other planning/program agendas
- Attending other planning/program meetings
- Participating in other planning processes
- Monitoring community budget meetings for other community program opportunities

The successful implementation of this plan will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community. Regular efforts should be made to monitor the progress of mitigation actions implemented through other planning mechanisms. Where appropriate, priority actions should be incorporated into planning updates. Existing planning mechanisms in which the MJHMP has been integrated are listed in Table 2.

Table 2: Previous Plan Integration for the Village of Washingtonville

Type of Plan	Integration Method
Capital Improvement Budget	Hazard mitigation actions will be considered while developing annual capital improvement plans. Compliance with mitigation goals and objectives and the site's hazard vulnerability will also be considered during the evaluation of infrastructure and facilities projects.
Operating Budget	Hazard mitigation actions are to be considered within day-to-day operating budgets as funding permits.
Building & Zoning Ordinances	Review of the hazard mitigation plan (HMP) and hazard analyses is part of the evaluation of land use, zoning, and development review ordinances and permitted processes.
Comprehensive Land Use Plan	Such elements as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.
Grant Applications	Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the HMP.
Fire Plan	Fire plans for the municipality and local fire departments can use data and mapping in the HMP.

The plan must also identify the local planning mechanisms where the updated hazard mitigation information/actions may be integrated. The plan must describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms.

Table 3: Future Types of Plans That the Village of Washingtonville Can Use for Mitigation Actions

Type of Plan	Integration Method
Capital Improvement Budget	Hazard mitigation actions will be considered while developing annual capital improvement plans. Compliance with mitigation goals and objectives and the site's hazard vulnerability will also be considered during the evaluation of infrastructure and facilities projects.
Operating Budget	Hazard mitigation actions are to be considered within day-to-day operating budgets as funding permits.
Building & Zoning Ordinances	Review of the hazard mitigation plan (HMP) and hazard analyses is part of the evaluation of land use, zoning, and development review ordinances and permitted processes.

Type of Plan	Integration Method
Comprehensive Land Use Plan	Such elements as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.
Human Resource Manual	Employee job descriptions may contain elements related to hazard mitigation planning and associated recommendations.
Grant Applications	Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the HMP.
Fire Plan	Fire plans for the municipality and local fire departments can use data and mapping in the HMP.
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 and educational opportunities.
Economic Development	Local chambers of commerce and other economic development agencies can use the HMP to better inform new/expanding businesses in finding suitable locations.

Critical Facilities Information

Table 4 provides information on critical facilities located within the floodplain for the Village of Washingtonville. Identifying critical facilities in flood-prone areas is crucial for effective emergency planning and risk management. By understanding the potential impact of flooding on these facilities, local authorities can develop proactive strategies to mitigate risks and ensure the safety and functionality of these important assets during flood events. This information is valuable for decision-making and resource allocation for emergency response and preparedness efforts.

Table 4: Critical and Essential Facilities Located in the Village of Washingtonville

Facility Name	Address	Facility Type	Located in 1% or 0.2% Flood Event Chance Area?	Protected to a 0.2% chance flood event?	Associated Mitigation Action
Frontier Communications	Unknown	Communication Infrastructure	Y	N	VW-2 (Flood Study)
Little Harvard Childcare	83 E Main St,	School	Y	N	VW-2 (Flood Study)

Facility Name	Address	Facility Type	Located in 1% or 0.2% Flood Event Chance Area?	Protected to a 0.2% chance flood event?	Associated Mitigation Action
Vern Allen Park	Ahern Boulevard	Park	Y	N	VW-2 (Flood Study),
Washingtonville Department of Public Works Garage	1 Walt Cole Boulevard	Government	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Department of Public Works Sewer	3 Walt Cole Boulevard	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Fire Department	89 E. Main Street	Fire Station	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Middle School	38 W. Main Street	School	Y	N	VW-2 (Flood Study)
Washingtonville Pediatrics	10 Weathervane Dr	Health	Y	N	VW-2 (Flood Study)
Washingtonville Sewage Treatment Plant	2 Walt Cole Blvd	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Village Hall	9 Fair Lawn Dr	Government	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Water Plant	Conklin Way	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)

Jurisdiction/Public Identified Vulnerabilities

Table 5: Village of Washingtonville Identified Vulnerabilities

Vulnerable Assets	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
People	
Low-Income Families	Economic instability can make it difficult for these families to access resources or recover from disasters.
Elderly Residents	Seniors may face mobility challenges and health issues, hindering their evacuation during emergencies.
Individuals with Disabilities	They may require specific support services and can face barriers to transportation and assistance during crises.
Structures	
Older Housing Stock	Many homes in Unionville are older and may not meet current building codes, thereby increasing vulnerability to natural disasters.
Small Commercial Buildings	These structures often lack the structural reinforcement needed for severe weather conditions, making them vulnerable to destruction or significant damage.
Economic Assets	
Local Businesses	Small businesses can be particularly vulnerable to economic downturns, natural disasters, and changes in consumer behavior.
Natural, Historic, and Cultural Resources	
Water Resources	Local water bodies and wetlands could be impacted by flooding, which can lead to contamination and habitat loss.
Historic Buildings	Structures may not meet modern building codes, making them vulnerable to severe weather events, such as heavy snowfall.
Cultural Sites	Sites that hold community significance may be placed at risk through flooding or extreme weather, which can damage artifacts and impair access.
Critical Facilities and Infrastructure	
Utilities	Water, electricity, and gas services can be disrupted by storms or flooding, affecting the entire community. Vulnerabilities come from aging infrastructure and proximity to flood zones.
Emergency Services	Fire stations, hospitals, and police facilities may be in low-lying, flood-prone areas, impacting their ability to respond during disasters.
Community Activities	

Vulnerable Assets	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
Public Gatherings	Parks and community centers are often used for events and can become inaccessible during severe weather, hindering community cohesion and activities.
Transportation Systems	Roads and bridges may experience damage or flooding, which can isolate communities during and after an event, delaying emergency response.
Are there any other assets that you can think to include? None	

Hazard Identification Specific to Jurisdiction

Orange County has a history of natural hazard events. During the 2025 Hazard Mitigation Plan (HMP) planning process, Orange County selected natural hazards that have impacted or could potentially impact the county. The Village of Washingtonville did not identify any technological hazards during this planning process but did identify seven natural hazards that impact the municipality, as shown in Table 6.

Table 6: Village of Washingtonville Natural Hazards

Hazards of Prime Concern
Drought
Earthquakes
Extreme Temperatures
Floods
Severe Thunderstorms
Severe Winter Storms
Wildfires

- Landslides, tornadoes, hurricanes/tropical storms, and ice jams are not profiled due to their lower susceptibility to events.
- Technological hazards will not be profiled in the HMP for the Village of Washingtonville.

Hazard Risk Assessment

After the identification of the hazards of concern, they were then reviewed to analyze the probability of future events, their consequences, and their maximum probable extent. This risk assessment helps to systematically identify which hazards are of the most concern for each jurisdiction. For further information about these and other identified hazards, please refer to the hazard profiles.

Table 7: Hazard Ranking for the Village of Washingtonville

Rank of Risk	Probability of Future Events	Consequence	Maximum Probable Extent
Droughts	Medium	Medium	Minor
Earthquakes	Low	Medium	Minor
Extreme Temperatures	Medium	Low	Medium
Floods	Medium	High	Major
Severe Thunderstorms	Medium	Medium	Medium
Severe Winter Storms	High	Medium	Medium
Wildfires	Medium	Medium	Medium

The following terms are used to describe the hazard consequence, the probability of future occurrence, and the maximum probable extent.

Probability of Future Events

The probability of future events is pulled from the likelihood categories of the 2022 County Emergency Preparedness Assessment (CEPA). All jurisdictions reviewed Orange County's results. If they disagreed with the likelihood of future events, they reflected those results in Table 7.

- **Very Low:** This event is not expected to occur within this county.
- **Low:** There is the potential for this event to occur, but it is very unlikely within the next 50 years.
- **Medium:** This event could occur within the next 20 years, but it generally does not happen with any regular frequency in this county (natural/accidental hazards), and current intelligence does not indicate that it is an imminent threat (for terrorism).
- **High:** It is likely that this event will occur in this county within the next 5 years, based on historical precedence (natural/accidental hazards) or current intelligence reporting (terrorism threats).
- **Very High:** This event is expected to occur within the next year, without question, based on historical precedence in this county (natural/accidental hazards) or current intelligence reporting (terrorism threats).

Consequence

The hazard consequence is pulled from the 2022 CEPA. All jurisdictions reviewed Orange County's results, and if they disagreed with the category, they reflected those results in Table 7.

- **Very Low:** This event would cause virtually no impact on the county's people, responders, property, and economy.

- **Low:** The impact of this event would be minimal on the county's people, responders, property, and economy; response could generally be conducted without mutual aid.
- **Medium:** The impact of this event would be noticeable on the county's people, responders, property, and economy; mutual aid would likely be needed from other counties and/or the state.
- **High:** The impact of this event would be very significant on the county's people, responders, property, and economy; significant mutual aid resources would be called in from surrounding counties, the state, and the federal government.
- **Very High:** This event would have a devastating (or potentially catastrophic) impact on the county's people, responders, property, and economy; all mutual aid networks (local, state, and federal) would be immediately utilized, and government functions would be severely or wholly compromised.

Maximum Probable Extent

The magnitude/strength of a hazard event uses the scale reported in Table 8:

- **Minor:** Limited classification on scientific scale, slow speed of onset, or short duration of event.
- **Medium:** Moderate classification on scientific scale, moderate speed of onset, or moderate duration of event.
- **Major:** Severe classification on scientific scale, fast speed of/immediate onset, or long duration of event.

Table 8: Hazard Extent for Village of Washingtonville

Hazard	Minor	Medium	Major
Drought	Presence-Sensing Device Initiation (PSDI) -1.99 to 1.99+	PSDI -2.00 to -2.99	PSDI -3.00 to -5.00
Earthquakes	Mercalli Scale: I–V; Richter Scale: 0–4.8	Mercalli Scale: VI–VII; Richter Scale: 4.9–6.1	Mercalli Scale: VIII–XII; Richter Scale: 6.2–8.1+
Extreme Temperatures	Heat Index: 80°F–105°F Cold Temperature: 40°F–35°F Wind chill 36°F–17°F	Heat Index: 105°F–129°F Cold Temperature: 30°F–15°F Wind chill 25°F to -4°F	Heat Index: >130°F Cold Temperature: 15°F to -20°F Wind chill -7°F to -98°F
Floods	Outside of 100-yr and 500-yr flood zones, Zones A, AE, X	500-yr flood zone, Zone X	100-yr flood zone, Zone AE
Severe Thunderstorms	Hail: H0–H4, 5–40mm; Wind Force: 0–3; Knots: <1–10;	Hail: H5–H6, 30–60mm; Wind Force: 4–6; Knots: 11–27; LAL: 3–4	Hail: H7–H10, 50–>100mm; Wind Force: 7-12;

Hazard	Minor	Medium	Major
	Lightning Activity Levels (LAL): 1–2		Knots: 28–64+; LAL: 5–6
Severe Winter Storms	Temperature: 40°F–35°F Wind chill: 36°F–17°F	Temperature: 34°F–15°F; Wind chill: 25°F to -4°F	Temperature: 15°F to -20°F; Wind chill: 7°F to -98°F
Wildfires	Keetch-Byram Drought Index (KBDI): 0–200	KBDI: 200–500	KBDI: 500–800

Hazard Impact

Table 9 includes a list of possible impacts for the Village of Washingtonville. However, it is hard to predict a hazard's possible impact on a community given the magnitude, intensity, and land use trends.

Table 9: Hazard Impacts for the Village of Washingtonville

Hazard	Impact
Droughts	• Property damage • Loss of water supply • Increase in grassfire potential and intensity • Negative impact on citizens, including water restrictions and lack of drinkable water supply • Impact on car washes, parks, and pools
Earthquakes	• Injury or death • Property and infrastructure damage • Water contamination or loss from broken pipes • Transportation and communication disruption or damage • Increase in traffic accidents • Building collapse • Natural gas leak • Displaced residents • Power outages • Damage to the natural environment, including protected species and critical habitats
Extreme Temperatures	• Heatstroke/hypothermia or death • Property damage • Loss of water supply • Increased grassfire potential and intensity • Impact on logistics • Power outages • Road buckling

Hazard	Impact
	• Disruption in critical infrastructure operations • Vehicle engine failure
Floods	• Loss of electricity • Loss, or contamination, of water supply • Loss of property • Structure and infrastructure damage: flooded structures and eroded roads • Displaced residents • Snake migration and increase of mosquitoes • Fire: as a result of loss of water supply • Debris in transportation paths • Emergency response delays • Disruption of traffic that can impact the economy • Damage to the natural environment, including protected species and critical habitats
Severe Thunderstorms	• Property damage to fences, vehicles, equipment, and roofs • Transportation delays • Injuries and deaths • Debris from trees and damaged property • Electrical grid problems • Communication problems: downed phone and internet lines • Damage to the natural environment, including protected species and critical habitats
Severe Winter Storms	• Structural damage • Injuries or death • Power outages • Inability to use roads for driving • Increased traffic accidents • Loss of heat • Stranded travelers, motels/hotels at full capacity • Tree debris creates fuel load for fire hazard • Delayed emergency response time • Frozen/burst pipes, leading to loss of water • Disruption of traffic • Impacts on the economy • Reduced communications capabilities
Wildfires	• Injury or death • Property and fence damage • Road closure • Traffic accidents • Loss of power – burning utility poles

Hazard	Impact
	• Loss of property • Structure and infrastructure damage • Displaced residents • Loss of resources • Damage to the natural environment, including protected species and critical habitats

Hazard Event History

The following, taken from the National Centers for Environmental Information, are natural hazard events (organized by location and date) that occurred in the Village of Washingtonville between 2019 and 2024.

Table 10: Historical Events in the Village of Washingtonville Since 2019

Location	Date	Event Type	Deaths	Injuries	Property Damage	Crop Damage
Village of Washingtonville	9/1/2021	Flash flood	0	0	$0	$0
Village of Washingtonville	9/8/2023	Hail	0	0	$0	$0

Drought

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there is no record of drought that has explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Climate change has been anticipated to possibly increase the frequency and intensity of droughts in NYS. Warmer temperatures will increase evaporation and reduce surface water levels, leading to drier soil. Additionally, the variability of precipitation may increase, meaning there will be more periods of either extreme or little-to-no precipitation, with the latter potentially spurring a drought. Currently, climate change has yet to meaningfully affect drought occurrence in New York. Moreover, drought frequency in the northeast has stayed relatively constant, decreasing only slightly. Models have shown that increases in temperature have been counteracted by rises in humidity, resulting in negligible impacts to drought

trends in the northeast between 1980–2020. The extent to which increases in humidity are caused by global climate change versus more localized environmental effects remains unclear.[2]

Earthquakes

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there is no record of earthquakes having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Earthquakes are unlikely to be affected by climate change, due to their causes being largely unaffected by its resultant atmospheric changes. There are some indications that earthquakes became more frequent as glaciers melted thousands of years ago, and more common earthquakes in Greenland may be tied to warming temperatures, but the links between these phenomena and anthropogenic climate change are uncertain at best and have yet to affect New York. Earthquakes are not discussed in local, regional, or national climate impact assessments, highlighting that climate change is not expected to impact their frequency or intensity in the U.S.

Extreme Temperatures

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there are no records of extreme temperatures having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

The northeast is warming faster than many other U.S. regions. Accordingly, extreme cold events will likely become less frequent and have already become milder and less severe for much of North America in general and the northeast in particular. High-profile severe cold events have still occurred in recent years, but this is likely due to natural variability. Between 1900–2017, New York City has seen a clear decline in cold days, defined as when the minimum temperature is equal to or less than the 10th percentile of the daily minimum temperature of a given year. The impacts of climate change on the duration of individual cold waves are currently uncertain.

Climate change will significantly increase the frequency, severity, and duration of extreme heat events, including multi-day events, in every state region, with an expected corresponding increase in impacts without adequate adaptation. NYS is expected to see a five-fold increase in heat-wave days by 2050. By

[2] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

that same year, different regions of NYS are projected to experience between 11–30 additional days above 90°F per year, above the 1981–2010 baseline. The number of extreme heat events (periods of three or more days above 90°F) per year in different regions is expected to rise from a baseline of zero to two per year (1981–2010) by an additional one to four per year by the 2050s.

In areas where heat events currently occur less frequently, extreme heat impacts become more frequent and widespread by the middle of the century. For example, the Saint Lawrence Valley historically experiences one to two extreme heat events per decade but is expected to observe two to three events per year by 2050. Due to the relatively rapid change in the frequency, severity, and duration of extreme heat events, NYS will experience new impacts, while existing ones may be significantly exacerbated if no adaptive measures are taken. The New York State Energy Research and Development Authority's (NYSERDA) Climate Impacts Assessment (CIA) projects changes in heat-related extremes across 12 regions, each described in Figure 2. The CIA provides projections for the following heat-related extremes: days over 90°F, days over 95°F, number of heat waves, average length of heat waves, maximum heat index, days heat index is over 85°F, and days heat index is over 95°F. For the purposes of this hazard profile, days over 95°F, number of heat waves, and average length of heat waves are included as they align most closely with State Hazard Mitigation Plan (SHMP) data and definitions. For more information on the CIA's projections, including projections for every decade through the 2080s, see NYS Climate Impacts Assessment. By the 2050s, different regions of NYS are projected to experience an additional 5–46 days above 90°F per year above their 1981–2010 baselines.

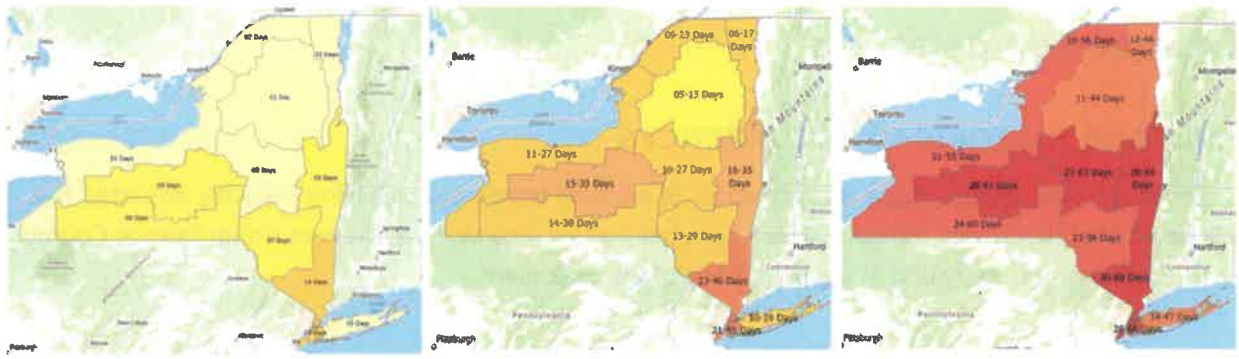


Figure 2: New York State Heat Projections by CIA Region

Left: Number of days above 90°F during the base period (1981–2010)

Middle: Additional days above 90°F by the 2050s, showing middle range (25th–75th percentile) 30-year mean values from model-based outcomes

Right: Additional days above 90°F by the 2080s, showing the middle range of values[3]

[3] "New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate," New York State Energy Research and Development Authority, Climate Impacts Assessment. https://nysclimateimpacts.org/

Floods

Flooding in Washingtonville results from snowmelt, heavy rains, or other weather conditions. By identifying flood-prone areas, it is possible to restrict development to open space uses, including passive recreation and agricultural uses, which do not obstruct water flows and are tolerant of flooding. FEMA has identified potential flood hazard areas in the Village of Washingtonville along the Moodna Creek, as shown on FEMA maps. In total, only 11 percent of the county area lies within high or moderate flood risk zones, according to the current Flood Insurance Rate Map (FIRM). The Village of Greenwood Lake has the highest proportion of its area within a high flood risk zone, followed by the Town of Goshen. The City of Port Jervis has the highest proportion of land within moderate flood risk zones, followed by the Village of Washingtonville.

PREVIOUS HISTORICAL OCCURRENCES

- March 8, 2008: Numerous flooded basements had to be pumped out in residential areas of Middletown and Washingtonville. Route 78 near Aspin Road/Wisner Avenue was also closed due to flooding.
- March 13–31, 2010: A nor'easter produced an extended period of heavy rainfall across the area on March 13, causing widespread flooding across portions of southeast New York. Moodna Creek and other small streams exceeded their banks in the Village of Washingtonville and caused numerous houses to be inundated with water. 1.63 inches of rain fell in the Village of Washingtonville. Heavy rain caused flooding. Widespread flooding in the village damaged private properties, school facilities, the police station, village offices, the fire department, and recreation facilities.
- March 7, 2011: Heavy rainfall resulted in moderate-to-major flooding across portions of southeast New York. In the Village of Washingtonville, the banks of Moodna Creek overflowed, causing flooding for first-floor residents and businesses on Route 208, as well as on Route 94 near Washingtonville High School. Rainfall totals measured 0.5 inches in the Village of Washingtonville.
- August 26–September 5, 2011: Heavy rain caused widespread flooding, which damaged private properties, school facilities, the police station, village offices, the fire department, and recreation facilities. The banks of Moodna Creek overflowed, requiring water rescues at Udderly Fresh Farms on Route 94 near Farmview Lane in the Village of Washingtonville. In addition, the raging waters from the creek burst holes in the foundations of houses.
- September 9, 2011: The remnants of Tropical Storm Lee brought a new round of flooding and hardship for those still coping with the damage caused by Hurricane Irene. Heavy rain began to fall across the region by 2:00a.m., adding 2–4 inches of precipitation to saturated ground, strained infrastructure, and swollen waterways. The Village of Washingtonville was again cut off from all routes except Route 208, and officials evacuated the Brookside Acres and Washingtonville Manor mobile home parks. Schools were closed or dismissed early across the region as municipalities declared states of emergency, most of them for a second time in as many weeks. The Orange County Government Center, which had only just reopened on Tuesday after having been closed the previous week because of damage from Hurricane Irene, shut down again Thursday afternoon.

- September 1, 2021: Extremely heavy rainfall associated with the remnants of Hurricane Ida overspread southeast New York during the evening of September 1 and continued through the early morning hours of September 2. Rainfall totals ranged from 5–8 inches across much of the region, with most of the rain falling in just a few hours. Ultimately, 17 people died as a result of the flash flooding, including 13 in New York City and 4 in the Lower Hudson Valley. Mountain Lodge Road in Washingtonville was closed due to flooding.

IMPACT OF CLIMATE CHANGE[4]

Climate change will increase the probability of extreme flood events. Given that projected climate change will affect the frequency and intensity of flood events, its impacts will likely change recurrence intervals. In one study focused on New York City, modeling showed that a 0.2 percent Annual Chance Flood in preindustrial times would see its return period shorten to roughly five years by 2045 due to climate change. The size of these events is also projected to change. For example, the study projected that a 0.2 percent Annual Chance Flood, which resulted in 11 feet of flooding above the mean tide level in 1970–2005, would cause 13–16.7 feet of flooding above the mean tide level by 2080–2100. Climate change will increase both the occurrence and severity of extreme flooding events.

Climate change will primarily affect flooding in New York through changing precipitation patterns and sea-level rise. Climate change directly affects precipitation and, with it, flooding. Extreme precipitation events have become more common as temperatures have warmed due to the increased capacity of warm air to hold water. Precipitation has increased across the northeast in all seasons, while the heaviest precipitation events have risen by 60 percent since 1958, leading to more frequent flood events. Going forward, precipitation is generally expected to increase in frequency, intensity, and duration, while extreme precipitation events will also become more common. This will lead to more flooding across the state. Meanwhile, sea levels are rising faster along New York's coast than the global mean—a phenomenon linked directly to climate change. Sea-level rise has significant implications for storm surge, high-tide flooding, and other coastal flood-related hazards.

The Intergovernmental Panel on Climate Change (IPCC) projects that short-duration, high-intensity rainfall, which causes flash flooding, is likely to increase in the northeastern U.S. due to climate change. However, localized increases in short-duration extreme rainfall may be heightened beyond what would be expected from temperature increase alone, possibly due to convective cloud feedback with uncertain links to climate change. The "flashiness" of flash floods, a metric for the speed and volume of flood events, may also increase due to climate change. In the northeast, it is unclear whether there will be significant changes in the duration of flash flood events, but there are likely to be increases in both the volume and peak rates of rainfall. This means that flash flood events could dump more water in shorter or unchanged amounts of time—with potentially grave impacts for affected communities. The extreme rainfall events made more frequent and intense by climate change will make urban flooding more likely, as already overburdened or insufficient drainage and infiltration systems become further overwhelmed.

[4] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

NYSERDA's CIA projects changes in extreme precipitation events across 12 regions. The CIA provides projections for the following precipitation-related extremes: days with over 1, 2, and 4 inches of precipitation. The CIA also has data on changes in annual precipitation that are not included in this profile. For more information on the CIA's projections, including projections for every decade through the 2080s, see the NYS Climate Impacts Assessment.[5]

Severe Thunderstorms

PREVIOUS HISTORICAL OCCURRENCES

September 8, 2023: Thunderstorms developed along a stalled boundary and moved through southeast NYS in an environment with 3,000–4,000 J/kg of (surface-based convective available potential energy) SBCAPE. Some of these storms were severe and produced damaging winds and large hailstones.

IMPACT OF CLIMATE CHANGE

Climate change will potentially increase the size and intensity of hailstones and hailstorms but will reduce their frequency in North America. This holds true in the northeast, where the overall number of hail days is projected to drop, along with small- and medium-sized hail events. Nonetheless, in the northeast, models show that very large hailstones will become more common. Ultimately, while hail is projected to become less frequent but more severe, these models remain uncertain. Effects of climate change on the duration of hail events, if any, are uncertain at this time.

Research on how climate change may affect lightning is limited. One model projected that the number of lightning strikes in the U.S. will increase by 12 percent for every degree increase in global average air temperatures. A more recent study in Europe projected that the impacts of climate change on lightning would be location-specific, with some areas experiencing more lightning strikes and others less, largely based on latitude. While projections of changes to intensity and duration remain limited, one study suggested that long-continuing-current lightning flashes—intense lightning flashes that are longer in duration and more likely to spark fires than other types of lightning—may become more common, though not significantly so in the northeast. Ultimately, while specific impacts to lightning remain uncertain, lightning occurs more frequently in warmer temperatures, meaning that it would be reasonable to expect an increased level of lightning occurrence with projected climate change. As of early 2023, there was no clear change in lightning frequency or intensity in the U.S. While there have been an increasing number of lightning-caused fires in the west, this has largely been due to dry conditions rather than to a change in the frequency or intensity of the lightning itself.[6]

[5] "New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate," MitigateNY, https://nysclimateimpacts.org/

[6] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

Severe Winter Storms

Winter storms create damage due to snowfall and winds, with occasional sleet, freezing rain, or hail occurring. Snowfall impairs visibility, obstructs roadways and facilities, and causes tree limbs to fall and roofs to collapse due to excess weight. It also creates slick roadways, which can be compounded further by sleet or freezing rain events. Washingtonville experiences the effect of severe winter storms frequently.

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there are no records of winter storms having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

In the northeast, while snow events may become less common and snow seasons may be shorter due to higher average temperatures, extreme snowstorms (including lake-effect snowstorms) may increase in frequency relative to historical levels. However, as warming continues to increase, this trend may not hold toward the end of the century. One study suggested that, while snowstorms will likely become less common due to atmospheric warming, when temperatures are sufficiently cold, they will produce more snow than has historically been the case. Climate-linked changes to snowstorm duration are unclear at this time. Many areas in the northeast have seen record snowstorm events in recent years. The relative increase in extreme snowstorm events over the past decades has been linked to climate change.[7]

Wildfires

PREVIOUS HISTORICAL OCCURRENCES

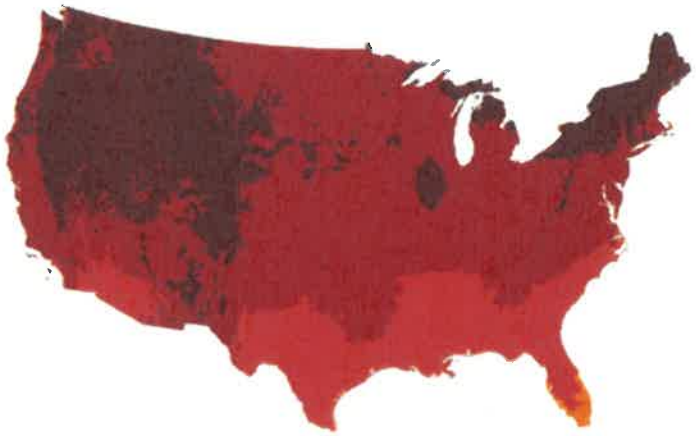
Since the last plan update, there are no records of wildfires that have explicitly impacted Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Wildfires are directly impacted by climate change. Climate change will lead to warmer temperatures and drought conditions, which create an environment ripe for fires, particularly in the western United States.[8]

[7] Ibid.

[8] Center for Climate and Energy Solutions, https://www.c2es.org/content/wildfires-and-climate-change/



Rising Temperatures

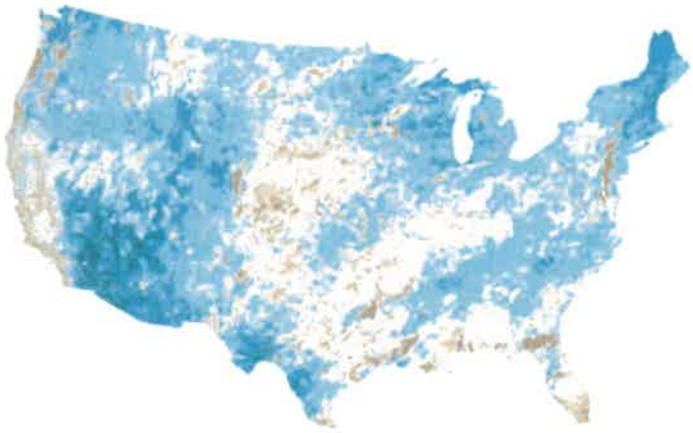
Rising average temperatures increase the rate of evaporation in dense wilderness areas, causing soil and vegetation to dry more quickly and become flammable.

Change in temperature (°F) in 30 years

1% 2% 3% 4%

Source: Eagle Rock Analytics, based on the NOAA Real-Time Mesoscale Analysis (RTMA) 2011-2020 hourly time series and adjusted to future conditions using the RCP 4.5 emissions scenario.

Figure 3: Rising Temperatures in the United States



Changing Precipitation

Changing precipitation patterns are exacerbating dry seasons in areas prone to wildfires, causing burns to become more frequent and severe.

Precipitation change in 30 years

-10% -5% 0% 5% 10%

Source: Eagle Rock Analytics, based on the NOAA Real-Time Mesoscale Analysis (RTMA) 2011-2020 hourly time series and adjusted to future conditions using the RCP 4.5 emissions scenario.

Figure 4: Changing Precipitation in the United States Due to Climate Change[9]

[9] First Street, "Changing Precipitation Trends are Drying Already Vulnerable Areas," https://firststreet.org/environmental-changes/fire

Information on climate change's impacts on wildfire frequency, intensity, duration, and location in New York State is currently limited. Generally, climate change is not expected to make wildfires a significant hazard of concern in New York. While wildfire occurrence is projected to increase in New York, baseline occurrence levels are so low that this increase is not expected to have a meaningful effect. Impacts on the duration and intensity of wildfires in New York are currently unclear, although the start and peak of wildfire season may occur earlier in the year.[10]

National Flood Insurance Program Summary

The Village of Washingtonville has been a participant in the National Flood Insurance Program (NFIP) (ID# 360638) since 1973. Details of NFIP policies within the Village of Washingtonville are provided in Table 11. Continued compliance with NFIP requirements is expected for the Village of Washingtonville. Mapped flood zones are illustrated in Figure 5.

[10] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

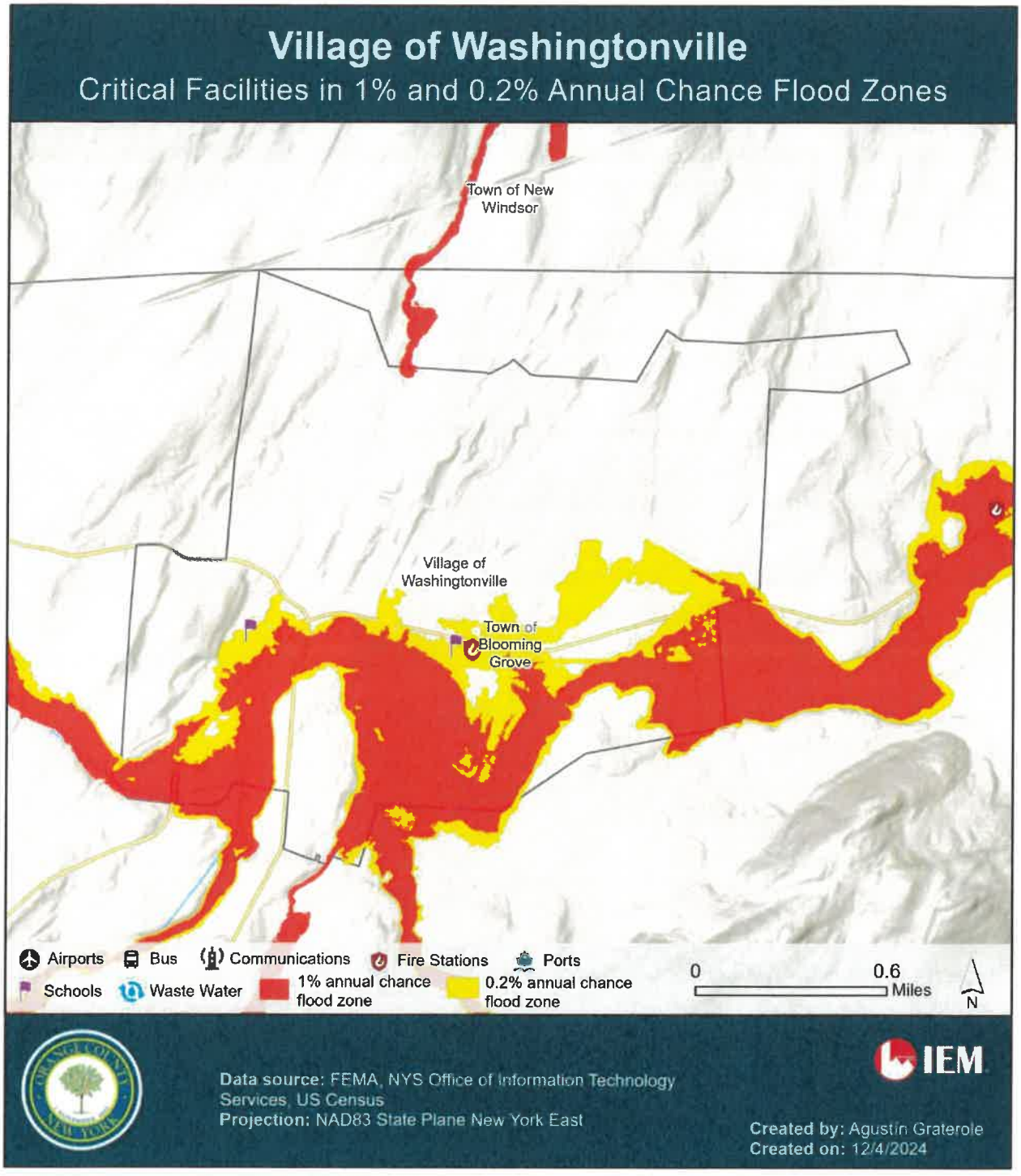


Figure 5: Mapped Flood Zones for the Village of Washingtonville

The NFIP questions in Table 11 were answered to the best of the Village of Washingtonville's ability.

Table 11: NFIP Floodplain Management Capabilities and Compliance

Floodplain Management	
Who is the floodplain manager? Is this their primary or secondary role?	Building Inspector and Engineer
Does the floodplain manager have adequate training and capacity for their role? If not, what else is needed?	Yes, none currently
How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?	Following NYS floodplain P&P and issuing floodplain permits.
When was the community's most recent Community Assistance Visit (CAV)?	Do not know
Were any violations noted on the community's most recent CAV?	Do not know
Is there an upcoming CAV? If not, is one needed?	No
When was the most recent floodplain management ordinance adopted?	1987
Does your community participate in the Community Rating System (CRS)? If so, describe the steps the community has taken to achieve the CRS goals.	No
Does the community's floodplain management ordinance include any higher standards? If so, please list.	No
Who is responsible for permitting?	Building Dept
How does the community issue development permits in the special flood hazard area?	Yes
Does the community maintain elevation certificates?	Yes
Does the community track the number of buildings in the special flood hazard area? If yes, are there any trends?	Yes, just started in August, and no trends at this time.
How many repetitive loss (RL) structures does the community have? (List number and type of structure.)	37 residential
How many severe repetitive loss (SRL) structures does the community have? (List number and type of structure.)	0
Have any RL/SRL properties been mitigated since the last plan update?	Yes, 28 homes for a FEMA buyout
Who is responsible for making substantial damage/substantial improvement determinations?	Building Dept

Floodplain Management	
How does the substantial damage/substantial improvement process work in your community?	Visual on-site inspection and then a written follow-up
Is there sufficient staff and training to make substantial damage/substantial improvement determinations?	Yes
How are substantial damage/substantial improvement requirements messaged to the public before and after an event?	Communication system announcements
Have any substantially damaged/substantially improved structures been mitigated since the last plan update?	Yes
How will the community remain in compliance with the NFIP moving forward? (Simply stating "the community will continue to comply with the NFIP" will not meet FEMA's planning requirements.)	To evaluate each project to make sure that all FEMA floodplain requirements are being met

Floodplain Mapping	
How does the community support map change requests? This could be requests during the Risk MAP process or through Letters of Map Amendment or Revision.	Through collection requests and reviewed by our Village engineer and building dept.
When did the latest Flood Insurance Rate Map (FIRM) become effective?	2009
When was the latest FIRM adopted?	Unsure
Is the FIRM and Flood Insurance Study (FIS) report in an accessible location? How would the public get access to their flood map information?	Do not know if the documents exist. In most cases, we use the FEMA website to access floodplain maps
Does the community use any Risk MAP products? If so, describe.	No
Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?	No
Other comments?	NA

Flood Insurance and Outreach	
How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?	Through available information from FEMA, we then disseminate throughout our community

Flood Insurance and Outreach	
How does the community engage with insurance agents on flood insurance?	Yes
Does the community (or state) have flood hazard disclosure laws?	No
How familiar is the public with their flood insurance options?	Limited; the most effective is when they are buying their home, they are notified the house requires flood insurance
How many properties have flood insurance in the community?	Unknown
Are there any areas where flood insurance is lacking?	Unknown; we have not seen any data related to this subject
Other comments?	NA

Table 12 illustrates the value of property in the Village of Washingtonville that is located within the 500-year floodplain and categorized by land use type. This table was derived from FEMA floodplain mapping and parcel data from the Orange County Property Assessor.

Table 12: Flood Hazard Analysis for the Village of Washingtonville

Parcel Count with Structures	# in Hazard Area	Value ($) in Community (In millions)
Residential	202	$50.5
Commercial	299	Unknown
Industrial	0	$0
Agricultural	4	Unknown
Religious/Non-profit	1	Unknown
Government	6	Unknown
Education	2	Unknown
Utilities	0	$0
Dams	0	$0
Parks	1	Unknown
Total	515	**$50.5**

Capability Assessment

Local mitigation capabilities are essential for reducing the impact of hazards on communities. Local authorities can effectively mitigate hazards by leveraging existing authorities, policies, programs, and resources. These capabilities encompass a range of strategies, such as land-use planning, building codes and enforcement, public education and outreach, infrastructure protection, and natural resource protection. Through collaboration with various stakeholders, including emergency management agencies, public works departments, and environmental organizations, local communities can implement comprehensive disaster mitigation efforts. The following tables provide the Village of Washingtonville's capabilities.

Planning and Regulatory Capability

A series of jurisdiction capability assessment forms were provided to the community to identify the local mitigation capabilities already in place within the Village of Washingtonville. These policies, programs, and resources can reduce hazard impacts and support the implementation of hazard mitigation activities. Table 13 and Table 14 provide the Village of Washingtonville's planning and regulatory capabilities, such as the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Table 13: Assessment of the Planning Capabilities of the Village of Washingtonville

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
General Plan	Yes	Unknown	Unknown
Capital Improvement Plan	N/A	N/A	N/A
Climate Change Adaptation Plan	N/A	N/A	N/A
Community Wildfire Protection Plan	N/A	N/A	N/A
Economic Development Plan	N/A	N/A	N/A
Land Use Plan	N/A	N/A	N/A
Local Emergency Operations Plan	Yes	Unknown	Unknown
Stormwater Management Plan	Yes	Unknown	Unknown
Transportation Plan	N/A	N/A	N/A

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Substantial Damage Plan	N/A	N/A	N/A
Downtown Strategic Plan	N/A	N/A	N/A
Waterfront Revitalization Plan	N/A	N/A	N/A
Other? (Describe)			

Table 14: Assessment of the Regulations and Ordinances Capabilities of the Village of Washingtonville

Regulation/ Ordinance	Does this regulation/ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Building Code	Yes	N/A	N/A
Flood Insurance Rate Maps	Yes	Unknown	Unknown
Floodplain Ordinance	Yes	Unknown	Unknown
Subdivision Ordinance	Yes	Unknown	Unknown
Zoning Ordinance	Yes	Zoning code currently being revied for updates	In progress
Natural Hazard-Specific Ordinance (Stormwater, Steep Slope, Wildfire)	N/A	N/A	N/A
Acquisition of Land for Open Space and Public Recreation Use	Yes	Currently reviewing	Unknown
Prohibition of Building in At-Risk Areas	N/A	N/A	N/A
Other? (Describe)			

Administrative and Technical

Administrative and technical capabilities include staff and their skills, as well as tools that can aid in performing mitigation actions.

Table 15: Assessment of the Administrative Capabilities of the Village of Washingtonville

Administrative Capability	In Place? (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Chief Building Official	Yes	Yes	Yes	Yes
Civil Engineer	Yes	Yes	Unknown	Unknown
Community Planner	Yes	Unknown	Unknown	Unknown
Emergency Manager	No	N/A	N/A	N/A
Floodplain Administrator	Yes	Yes	Yes	Yes
Geographic Information System (GIS) Coordinator	No	N/A	N/A	N/A
Planning Commission	No	N/A	N/A	N/A
Fire Safe Council	No	N/A	N/A	N/A
Community Emergency Response Team (CERT)	No	N/A	N/A	N/A
Active Voluntary Agencies Active in Disasters (VOADs)	No	N/A	N/A	N/A
Other?				

Table 16: Assessment of the Technical Capabilities of the Village of Washingtonville

Technical Capability	In Place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
Mitigation Grant Writing	Yes	Unknown	Unknown
Hazard Data and Information	No	N/A	N/A
Geographic Information System (GIS)	Yes	Unknown	Unknown
Mutual Aid Agreements	No	N/A	N/A
Other? (Please describe)			

Financial

Financial capabilities refer to the resources used to fund mitigation actions. Discussing funding and financial capabilities is important to determine what kinds of projects are feasible given their cost. Mitigation actions, such as outreach programs, have lower costs and often use staff time and existing budgets. Other actions, such as earthquake retrofits, could require substantial funding from local, state, and federal partners. Partnerships, including those willing to donate land, supplies, cash, or in-kind matches, can also be included.

Table 17: Assessment of the Financial Capabilities of the Village of Washingtonville

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Capital Improvement Project Funding	Yes	Unknown	Unknown	Unknown
General Funds	No	N/A	N/A	N/A
Hazard Mitigation Grant Program (HMGP/404)	No	N/A	Yes	No

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Building Resilient Infrastructure & Communities (BRIC)	No	N/A	Yes	No
Flood Mitigation Assistance (FMA)	No	N/A	Yes	No
Public Assistance Mitigation (PA Mitigation/406)	No	N/A	Yes	No
Community Development Block Grant (CDBG)	Yes	Unknown	Yes	No
Natural Resources Conservation Service (NRCS) Programs	No	N/A	No	N/A
U.S. Army Corps of Engineers (USACE) Programs	No	N/A	No	N/A
Property, Sales, Income, or Special Purpose Taxes	Yes	Unknown	Unknown	Unknown
Stormwater Utility Fee	No	N/A	No	N/A
Fees for Water, Sewer, Gas, or Electric Services	Yes	Unknown	Unknown	Unknown
Impact Fees from New Development and Redevelopment	Yes	Unknown	Unknown	Unknown
General Obligation or Special Purpose Bonds	Yes	Unknown	Unknown	Unknown
Federal-funded Programs (Please Describe)	No	N/A	No	N/A

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
State-funded Programs (Please Describe)	Yes	Unknown	Unknown	Unknown
Private Sector or Non-profit Programs	No	N/A	No	N/A
Other?				

Education and Outreach

Education and outreach capabilities are programs and methods to encourage and provide information on risk-reduction strategies. These programs may be run by a participant or community-based partner. Partners, especially those who support underserved communities, can help identify additional education and outreach capabilities.

Table 18: Assessment of the Education and Outreach Capabilities of the Village of Washingtonville

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)	No	N/A	
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)	No	N/A	
Public Meetings/Events (Please describe)	Yes	Unknown	In the event of a weather crisis, the village sends out notifications over our community notification system.
Emergency Management Listserv	No	N/A	
Local News	No	N/A	

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)	No	N/A	
Insurance Disclosures/Outreach	Yes	Unknown	When materials are available from different agencies
Organizations that Represent, Advocate for, or Interact with Underserved and Vulnerable Communities (Please Describe)	No	N/A	
Social Media (Please Describe)	Yes	Unknown	Part of the notification system
Other? (Please Describe)			

Opportunities to Expand and/or Improve Capabilities

Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting for mitigation actions, passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving mitigation updates, and making additions to existing plans as new needs are identified and recognized. None provided by jurisdiction.

Table 19: Capabilities to Expand or Improve in the Village of Washingtonville

Capability	Opportunity to Expand and/or Improve
Planning and Regulatory	• Our community is currently in the process of completing a Comprehensive Plan review and updating our zoning code rewrite. We are only two and half square miles with only one parcel of 155 acres available for development. This property has a large portion of flood way and 100, 500-year flooding zones. • In our planning process, we have attempted to keep our bedroom community zoning the same with some slight changes in our residential office and business zoning. Our community has been affected by recent major flooding twice in 2011 and 2021. We have executed evacuations in several areas that have a high flood risk. Due to many factors of development upstream and with federal agencies

Capability	Opportunity to Expand and/or Improve
	not allowing any stream maintenance, our situation will only worsen over time.
Administrative and Technical	• Our building department is overseeing floodplain management along with our engineers. Due to new Village board members, it would be a priority to offer annual training for new staff and board members to understand technical and administrative responsibility.
Financial	• From a financial standpoint, we could use additional assistance with grant opportunities. We are very limited on what we can do with budget increases without causing additional hardship on our residents.
Education and Outreach	• We have reached out to our residents when we receive any information through social media and our website. If local seminars in person or via Teams/Zoom, etc., would be a huge assistance, since I think this information should come from the agencies in charge of disbursements. • We do use a communications system to advise our residents of critical and informational announcements.

Mitigation Strategy

Mitigation Goals

All jurisdictions in Orange County have elected to adopt the same goals.

- Promote disaster-resistant development.
- Build and support local capacity to enable the public to prepare for, respond to, and recover from disasters.
- Reduce the possibility of damages and losses to government-owned assets, including buildings, infrastructure, and protected land.
- Reduce the possibility of damage and losses from all hazards of concern.
- Enhance public safety and reduce flood risks by addressing vulnerabilities associated with high-hazard potential dams.
- Prioritize reaching vulnerable populations by targeting outreach strategies and inclusive communication methods.

Prioritization of Mitigation Activities

The STAPLEE method (which examined social, technical, administrative, political, legal, economic, and environmental criteria) is vital for hazard mitigation planning due to its provision of a structured,

comprehensive approach to prioritizing actions based on their feasibility, impact, and alignment with community goals. By examining the aforementioned criteria, the STAPLEE method ensures that chosen actions are not only effective at reducing hazard risks but are also practical to implement and sustain. This method emphasizes balancing costs with benefits, ensuring that resources are allocated to the most impactful actions. Furthermore, STAPLEE promotes community support and stakeholder buy-in, as it prioritizes actions that reflect local values and gain political backing. This holistic approach ultimately fosters more resilient communities, as mitigation actions chosen through the method are better integrated into local frameworks and supported over the long term. The STAPLEE method prioritizes hazard mitigation based on the following criteria:

1. **Social:** Assesses public support and potential impacts on the community. It considers whether an action aligns with community values and avoids disproportionately affecting any group.
2. **Technical:** Evaluates whether the action is technically feasible and effective in reducing future losses without creating new issues. This ensures that solutions address root causes rather than symptoms.
3. **Administrative:** Reviews available resources, staffing, and maintenance needs to determine whether the jurisdiction is able to implement and sustain the action.
4. **Political:** Considers political and stakeholder support, including commitments from local leaders and champions, to ensure the action has a stable foundation for success.
5. **Legal:** Confirms the legal authority to perform the action, checking whether current laws and regulations support it or if any changes are necessary.
6. **Economic:** Weighs the action's costs against its financial benefits and impact on the local economy, favoring cost-effective solutions that fit within budget constraints.
7. **Environmental:** Considers the environmental impact, ensuring the action aligns with sustainability goals and complies with federal laws, such as the National Environmental Policy Act (NEPA), especially when federal funding is involved.

Previous Mitigation Activities

Table 20: Previous Mitigation Activities for the Village of Washingtonville

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-1	**Hazard Mitigation Plan Update**	All hazards	Village Board, Village Clerk, Village Consultant Engineer, Village Building Inspector with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget FEMA planning grants	Unknown	Long-term	High	Carried forward
Description: Continue to support the implementation, monitoring, maintenance, and updating of this Plan.								
VW-2	**Hydraulic analysis of the Moodna Creek**	Flood	Village Board, NY Rising – Washingtonville Planning Committee, Town of Blooming Grove Board, GOSR	Operating Budget	Unknown	Long-term	High	Carried forward
Description: Pursue a hydraulic analysis of the Moodna Creek as it has numerous bridges and structures that represent present and potential constrictions due to the design and location of structures. The results of this analysis will be used as a resource in the planning and development of further actions to reduce flood impacts.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-3	**Adoption and Enforcement of Floodplain Management Program**	Flood, Severe Storm	Village Board, Village Consultant Engineer, Village Building Inspector, NYSDEC, FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Maintain compliance with and good standing in the National Flood Insurance Program (NFIP), including adoption and enforcement of floodplain management requirements (e.g., regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives. **VW-7 and VW-13**								
VW-4	**Tree Trimming Program**	Severe Storm	Village Building Inspector	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.								
VW-5	**Mutual Aid Agreements**	All hazards	Village Board, with support from Orange County, NYSDHSES, and surrounding communities	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-6	**Backup Power permit fee waiver**	Severe Storm	Village Board	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Implement permit fee waivers for installation of backup power for private property.								
VW-7	**Obtain and archive elevation certificates**	Flood, Severe Storm	Village Building Inspector and Village Consultant Engineer	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Obtain and archive elevation certificates.								
VW-8	**Update Comprehensive Emergency Management Plans**	All hazards	Village Board, Local Emergency Manager, Village Police, Washingtonville Fire District, Blooming Grove EMS, with support from Orange County Emergency Services	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Support ongoing updates of Comprehensive Emergency Management Plans								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-9	**Improved structure and facility inventories and hazard datasets**	All hazards	Village Consultant Engineer, Local Emergency Manager, Orange County Hazard Mitigation Plan Coordinator, Moodna Creek Alliance	FEMA Mitigation Grant Programs with Local Match	Unknown	Long-term	Medium	Carried forward
Description: Participate in local, county, and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment and hazard mitigation. Projects include, but will not be limited to, installing automatic level-sensing devices on streams and lakes to provide for early warning of potential flooding, developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS), which could be used for various planning and emergency management purposes.								
VW-10	**Zoning Ordinances**	All hazards	Village Board, Village Planning Board, Village Zoning Board of Appeals with support from Orange County	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas.								
WV-11	**Develop flood damage assessment database**	All hazards	Village Board and Village Clerk with support	Municipal Budget	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			from Orange County					
Description: Develop programs/procedures to capture and archive loss data from events. Examples include recording location and length of roadway closures; developing a database of residential and commercial property damage, including permit history for such repairs; high water marks, perhaps painting phone poles with high water marks and/or regulatory Base Flood Elevations (BFEs).								
VW-12	**Installation of staff gauges and automatic level sensing devices**	Flood	Village Engineer, Watershed Planning Groups, County OEM, NYSDEC	FEMA Mitigation Grant Programs with Local Match	Unknown	Long-term	Medium	Carried forward
Description: Research, purchase, install, and maintain a system of staff gauges and automatic level-sensing devices to be placed in appropriate areas (Main Street pedestrian bridge and South Street Bridge) to determine flood height of the Moodna Creek. The gauges should be readable from a certain distance and should enable volunteer spotters and the public to monitor stream height.								
VW-13	**Floodplain Administration**	Flood	Village Board, Village Building Inspector, Village Consultant Engineer, Local Emergency Manager with support from Orange County, NYSDEC and FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Promote the participation of Floodplain Administrators within the planning process and other activities.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-14	**Training and Certification Damage Assessment Programs**	All hazards	Various Village Officials with support from Orange County	Municipal Budget, FEMA, HMA and HLS grant programs	Unknown	Long-term	Medium	Carried forward
Description: Work with regional agencies (i.e., county and NYSDHSES) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g., code officials, floodplain managers, engineers). This action includes training of Emergency Personnel in ICS systems, as called for in the Town of Blooming Grove and Village of Washingtonville Emergency Response Plan.								
VW-15	**Regulations on underground utilities**	Severe Storm	Village Board	Municipal Budget	Unknown	Long-term	Low	Carried forward
Description: Adopt regulations for undergrounding utilities in new developments and install electric lines underground where possible throughout the village.								
VW-16	**Disaster Recovery Consulting Services**	All hazards	Village Board with support from Orange County Emergency Management, NYSDHSES and FEMA	Municipal Budget	Unknown	Long-term	Low	Carried forward
Description: Identify and develop agreements with entities that can provide support with FEMA/NYSDHSES paperwork after disasters; qualified assessment personnel to improve post-disaster capabilities, such as damage assessment; FEMA/NYSDHSES paperwork compilation, submissions, and record-keeping.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-17	**Relocation of critical facilities**	Flood	Village Board and support from NYSDHSES, FEMA	FEMA Mitigation Grants	Unknown	Long-term	High	Carried forward
Description: Relocate emergency and governmental services outside of floodplain. Plans to construct a new Village Hall are currently being considered by village officials.								
VW-18	**Elevation of structures**	Flood, Severe Storms	Village Board in cooperation with the Town of Blooming Grove Town Board; support from Orange County Government, GOSR, Elected State and Federal Representatives, NYSDHSES, FEMA	FEMA Mitigation Grants	Unknown	Long-term	High	Carried forward
Description: Assist in the purchase, relocation, or elevation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority, including acquisition of private residences. Phase 1: Identify appropriate candidates based on cost-effectiveness. Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability. Projects for immediate action include the private residence in the Tappan Subdivision, supporting acquisition of severe repetitive loss properties on E. Main Street and Cardinal Drive, and the relocation of emergency and governmental services outside of floodplain.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-19	**Education and Public Awareness Programs**	All hazards	Village Board, Local Emergency Manager, NY Rising Washingtonville Planning Committee with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget, HMA programs with local or county match	Unknown	Long-term	Medium	Carried forward
Description: Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: • **Conduct educational outreach to owners of important water resources facilities.** • **Educate property owners in stream maintenance.** • **Provide and maintain links to the HMP website and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.** • **Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.** • **Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.** • **Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.**							
VW-20	**Backup power installation education**	Severe Storm	Village Building Inspector	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Provide public education and outreach on proper installation and/or use of backup power								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-21	**NOAA Storm Ready Program**	Severe Storm	Village Board and Local Emergency Manager with support from Orange County Emergency Management, NYSDHSES, and FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Enhance the village's resilience to severe (winter) storms by joining the NOAA "Storm Ready" program and supporting communities in joining the program								
VW-22	**Compile and update MS4 ID list for stormwater discharges**	Flood	Village Board, Village DPW, Moodna Creek Alliance, with support from Town of Blooming Grove Town Board	Municipal Budget, Volunteer	Unknown	Long-term	Medium	Carried forward
Description: Work with DPW to compile and/or update the existing list of MS4 ID illicit stormwater discharges within the Town of Blooming Grove and the Village of Washingtonville. Both the Town and Village of Washingtonville are MS4 stormwater communities. This would involve identifying point source discharges to the Moodna or feeder streams, NOT including sheet flow, or non-point source pollution. While non-point source pollution is now the chief source of stream pollution, the importance of the point source for flooding is flow rate, which is higher than non-point source flow since infiltration and friction are far lower. Work with DPW to document the effects of discharges, and where and how often they occur.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-23	**Drainage Improvements study**	Flood	Village Board, Village Consultant Engineer, and Village DPW	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	High	Carried forward
Description: Facilitate drainage improvements throughout the village. Phase 1 will include a study and concept design								
VW-24	**Stormwater storage study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek Alliance, U.S. Army Corp of Engineers (USACE), New York State	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	High	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Department of Environmental Conservation (NYSDEC), Federal Emergency Management Agency (FEMA)					
Description: Explore the possibility of stormwater storage along Moodna Creek. The village will participate in an oversight committee to address stormwater storage in Moodna Creek. At present, there are ongoing discussions with the science and data subcommittee with the Moodna Creek Watershed Inter-Municipal Council regarding potential locations for storage. Consider excavation of former Washingtonville Village Hall as potential flood water storage location.								
VW-25	**Dam removal study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Alliance, USACE, NYSDEC, FEMA					
Description: Elimination/modification of existing dams, including dams at Tomahawk Lake and Salisbury Mills, in accordance with the Moodna Creek Watershed Plan; small dam in Washingtonville, approximately where the Moodna Creek runs behind the Hook & Ladder; and the Mays Field municipal site is located on the other side of the dam where stream bank erosion occurs — the dam cannot be seen at normal flow, but during dry weather it can be observed. Phase 1 of this initiative would involve an in-depth study of the costs, benefits, and impacts of dam removal.								
VW-26	**Flood proofing of water/wastewater facility**	Flood	Village Board, Village Consultant Engineer, Village DPW, NYSDHSES, and NYSDEC	Municipal Budget HMA Programs with Local or County Match	Unknown	Long-term	Medium	Carried forward
Description: Flood proofing of water/wastewater facility: The village wastewater facility is currently in construction with H2M but not designed to be flood proof to withstand a 500-year flood event.								
VW-27	**Debris Removal from Moodna Creek**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove	Municipal Budget	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Town Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA					
Description: Consider debris removal from Moodna Creek, including identifying the location, and potential removal, of beaver dams in the creek.								
VW-28	**Dredging projects study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR, and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	Low	Carried forward
Description: Continue to explore dredging opportunities. Reports have been prepared for potential dredging operations, although permits for the projects have been delayed, meaning they have not progressed.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-29	**Salisbury Mill Hydroelectric Dam modification**	Flood	Town of Blooming Grove Town Board, Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee with support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Modification of Salisbury Mill hydroelectric dam to control creek water level.								
VW-30	**Improve communication systems, emergency notification system**	All hazards	Village Board and Town Board, Local Emergency Manager; support from Orange County Emergency Services, NYSDHSES, and FEMA	Municipal Budget	Unknown	Long-term	High	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
Description: Improve communication systems, including the development of a town-wide emergency notification system. This action should follow the finalization of the Town of Blooming Grove's Emergency Alert System Plan (currently under development).								
VW-31	**Generators for critical facilities**	All hazards	Village Board, Village Police Department, Village Consultant Engineer, Village DPW with support from NYSDHSES and FEMA	Municipal Budget	Unknown	Long-term	High	Carried forward
Description: Obtain and install backup power sources at critical facilities, including a portable generator for Washingtonville Police Station to provide service throughout the village.								

2025 Proposed Mitigation Activities

Table 21: 2025 Proposed Mitigation Activities for the Village of Washingtonville

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-1	**Plan Integration of Updated Hazard Mitigation Plan Risk Assessment and Mitigation Strategy into Existing**	Drought, Earthquake, Extreme Temperatures, Flood, Severe Thunderstorms,	Village Board, Village Clerk, Village Consultant Engineer, Village Building	Municipal Budget FEMA planning grants	$10,000	3–5 years	High

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
	Planning Mechanisms	Wildfire, Severe Winter Storms	Inspector with support from Orange County Government, NYSDHSES, FEMA				
Description: Integrate the updated Hazard Mitigation Plan into comprehensive plans, building codes, etc.							
VW-2	**Hydraulic analysis of the Moodna Creek**	Flood	Village Board, NY Rising – Washingtonville Planning Committee, Town of Blooming Grove Board, GOSR	Operating Budget	$50,000	3–5 years	High
Description: Pursue a hydraulic analysis of the Moodna Creek, which contains numerous bridges and structures that represent present and potential constrictions due to their design and location. The results of this analysis will be used as a resource in the planning and development of further actions to reduce flood impacts.							
VW-3	**Adoption and Enforcement of Floodplain Management Program**	Flood, Severe Thunderstorm	Village Board, Village Consultant Engineer, Village Building Inspector, NYSDEC, FEMA	Municipal Budget	$5,000	3–5 years	Medium
Description: Maintain compliance with and good standing in the National Flood Insurance Program (NFIP), including adoption and enforcement of floodplain management requirements (e.g., regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives.							
VW-4	**Tree Trimming Ordinance Program**	Severe Thunderstorm	Village Building Inspector	Municipal Budget	$10,000	3–5 years	Medium
Description: Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability and service continuity.							
VW-5	**Mutual Aid Agreements for Post-Disaster Substantial Damage Estimation**	Drought, Earthquake, Extreme Temperatures, Flood, Severe Thunderstorms, Wildfire, Severe Winter Storm	Village Board, with support from Orange County, NYSDHSES, and surrounding communities	Municipal Budget	$500	3–5 years	Medium
Description: Create/enhance/maintain mutual aid agreements with neighboring communities for supporting substantial damage estimation activities in compliance with the local flood damage prevention ordinance.							
Description: Implement permit fee waivers for the installation of backup power for private property.							
VW-6	**Obtain and archive elevation certificates**	Flood, Severe Thunderstorm	Village Building Inspector and Village Consultant Engineer	Municipal Budget	$1,000	3–5 years	Medium
Description: Obtain and archive elevation certificates.							
VW-7	**Improved structure and facility inventories and hazard datasets**	Flood	Village Consultant Engineer, Local Emergency Manager,	FEMA Mitigation Grant Programs with Local Match	$10,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Orange County Hazard Mitigation Plan Coordinator, Moodna Creek Alliance				
Description: Participate in local, county, and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment and hazard mitigation. Projects include, but will not be limited to, installing automatic level-sensing devices on streams and lakes to provide early warning of potential flooding; developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS), which could be used for various planning and emergency management purposes.							
VW-8	**Zoning Ordinances in SFHA**	Flood	Village Board, Village Planning Board, Village Zoning Board of Appeals with support from Orange County	Municipal Budget	$5,000	3–5 years	Medium
Description: Incorporate ordinances and/or zoning restrictions to control and mitigate future development within Special Flood Hazard Areas.							
WV-9	**Develop hazard damage assessment database**	Flood, Severe Thunderstorms, Severe Winter Storm	Village Board and Village Clerk with support from Orange County	Municipal Budget	$10,000	3–5 years	Medium
Description: Develop programs/procedures to capture and archive loss data from events. Examples include recording location and length of roadway closures; developing a database of residential and commercial property damage, including permit history for such repairs; high water marks, perhaps painting phone poles with high water marks and/or regulatory Base Flood Elevations (BFEs).							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-10	**Moodna Creek Water Surface Elevation Monitoring for Flood Mitigation Planning**	Flood	Village Engineer, Watershed Planning Groups, County OEM, NYSDEC	FEMA Mitigation Grant Programs with Local Match	$20,000	3–5 years	Medium
Install and ensure the operation of the Moodna Creek flood gauge to provide a source of best available data and inform localized data-driven hazard mitigation planning for flood.							
VW-11	**Floodplain Administration**	Flood	Village Board, Village Building Inspector, Village Consultant Engineer, Local Emergency Manager with support from Orange County, NYSDEC and FEMA	Municipal Budget	$5,000	3–5 years	Medium
Description: Promote the participation of Floodplain Administrators within the planning process and other activities.							
VW-12	**Regulations on underground utilities**	Earthquake, Severe Storm	Village Board	Municipal Budget	$75,000	3–5 years	Low
Description: Adopt regulations for undergrounding utilities in new developments and install electric lines underground where possible throughout the village.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-13	**Flood Protection Project for critical facilities to include retrofits and elevation feasibility study**	Flood	Village Board and support from NYSDHSES, FEMA	FEMA Mitigation Grants	$4,000,000	3–5 years	High
Description: Install retrofits within the governmental services buildings to protect from possible flooding events. Feasibility study for structural elevation and/or flood barriers.							
VW-14	**Floodproofing (non-residential), Relocation, Elevation, Demolition of Structures**	Flood, Severe Thunderstorm	Village Board in cooperation with the Town of Blooming Grove Town Board; support from Orange County Government, GOSR, Elected State and Federal Representatives, NYSDHSES, FEMA	FEMA Mitigation Grants	$1,000,000	3–5 years	High
Description: Assist in the purchase, relocation, or elevation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as a priority, including acquisition of private residences. Phase 1: Identify appropriate candidates based on cost-effectiveness. Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability. Projects for immediate action include the private residence in the Tappan Subdivision, supporting acquisition of severe repetitive loss properties on E. Main Street and Cardinal Drive, and the relocation of emergency and governmental services outside of the floodplain.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-15	**Flood Mitigation Education and Public Awareness Programs**	Drought and Flooding	Village Board, Local Emergency Manager, NY Rising Washingtonville Planning Committee with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget, HMA programs with local or county match	$10,000	3–5 years	Medium
Description: Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: • **Conduct educational outreach to owners of important water resources facilities, including water conservation and stream maintenance.** • **Provide and maintain links to the HMP website and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.** • **Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.** • **Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.** • **Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.**						
VW-16	**Backup power installation education**	Severe Storm, Winter Storms	Village Building Inspector	Municipal Budget	$5,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
Description: Provide public education and outreach on proper installation and/or use of backup power.							
VW-17	**NOAA Storm Ready Program**	Severe Thunderstorm	Village Board and Local Emergency Manager with support from Orange County Emergency Management, NYSDHSES, and FEMA	Municipal Budget	$15,000	3–5 years	Medium
Description: Enhance the village's resilience to severe winter storms by joining the NOAA "Storm Ready" program and supporting communities in joining the program.							
VW-18	**Compile and update MS4 ID list for stormwater discharges**	Flood	Village Board, Village DPW, Moodna Creek Alliance, with support from Town of Blooming Grove Town Board	Municipal Budget, Volunteer	$30,000	3–5 years	Medium
Description: Work with DPW to compile and/or update the existing list of MS4 ID illicit stormwater discharges within the Town of Blooming Grove and the Village of Washingtonville. Both the Town and Village of Washingtonville are MS4 stormwater communities. This would involve identifying point source discharges to the Moodna or feeder streams, NOT including sheet flow, or non-point source pollution. While non-point source pollution is now the chief source of stream pollution, the importance of the point source for flooding is flow rate, which is higher than non-point source flow since infiltration and friction are far lower. Work with DPW to document the effects of discharges, and where and how often they occur.							
VW-19	**Drainage Improvements study**	Flood	Village Board, Village	Municipal Budget, HMA	$40,000	3–5 years	High

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Consultant Engineer, and Village DPW	Programs with Local or County Match			
Description: Facilitate drainage improvements throughout the village. Phase 1 will include a study and concept design.							
VW-20	**Stormwater storage study**	Flood	Village Board	Municipal Budget, HMA Programs with Local or County Match	$40,000	3–5 years	High
Description: Explore the possibility of stormwater storage along Moodna Creek. The village will participate in an oversight committee to address stormwater storage in Moodna Creek. At present, there are ongoing discussions with the science and data subcommittee with the Moodna Creek Watershed Inter-Municipal Council regarding potential locations for storage. Consider excavation of the former Washingtonville Village Hall as a potential flood water storage location.							
VW-21	**Dam removal study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek	Municipal Budget, HMA Programs with Local or County Match	$170,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Alliance, USACE, NYSDEC, FEMA				
Description: Elimination/modification of existing dams, including the dams at Tomahawk Lake and Salisbury Mills, in accordance with the Moodna Creek Watershed Plan; the small dam in Washingtonville, approximately where the Moodna Creek runs behind the Hook & Ladder, and the Mays Field municipal site is located on the other side of the dam where streambank erosion occurs, and the dam cannot be seen at normal flow but can be observed during dry weather. Phase 1 of this initiative would involve an in-depth study of the costs, benefits, and impacts of dam removal.							
VW-22	**Flood proofing of water/wastewater facility**	Flood	Village Board, Village Consultant Engineer, Village DPW, NYSDHSES, and NYSDEC	Municipal Budget HMA Programs with Local or County Match	$1,000,000	3–5 years	Medium
Description: Flood proofing of the water/wastewater facility: The village wastewater facility is currently in construction with H2M but not designed to be flood proof to withstand a 500-year flood event.							
VW-23	**Flood Protection Project at Moodna Creek, Dredging Ordinance and Long-Term Flood Impacts Study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town	Municipal Budget	$30,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA				
Description: Initiate a long-term dredge ordinance that includes a flood study and maintenance plan for the Moodna Creek, including identifying the location, and potential removal, of beaver dams in the creek, to reduce the flood impact to the area during flood events. By dredging the creek on schedule, the area will open up storage space and water flow.							
VW-24	**Salisbury Mill Hydroelectric Dam modification**	Flood	Town of Blooming Grove Town Board, Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee with support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget	$100,000	3–5 years	Medium
Description: Modification of the Salisbury Mill hydroelectric dam to control creek water level.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-25	**Improve communication systems, emergency notification system**	Earthquake, Extreme Temperatures, Floods, Severe Thunderstorms, Severe Winter Storms	Village Board and Town Board, Local Emergency Manager; support from Orange County Emergency Services, NYSDHSES, and FEMA	Municipal Budget	$40,000	3–5 years	High
Description: Improve communication systems, including the development of a village-wide emergency notification system. That would allow for notification on shelter openings given a catastrophic event for which life-saving decisions can be based.							
VW-26	**Installation of Alternative Energy Generation Equipment for critical facilities**	Extreme Temperatures, Severe Thunderstorms, Severe Winter Storms, Flood	Village Board, Village Police Department, Village Consultant Engineer, Village DPW with support from NYSDHSES and FEMA	Municipal Budget	$35,000	3–5 years	High
Description: Obtain and install backup power sources at critical facilities, including a generator for the Washingtonville Police Station to provide emergency power during power outages. The installation of a generator and associated accessory equipment to retrofit the structure's electrical system will provide energy backups for the continuity of operations for the community in the event of power loss during high wind severe storms and winter storms and flood events that can impact continuity of operations for critical facilities.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-27	**Wildland Vegetative Fuels Study and Ordinance**	Wildfire	Village Public Works	Municipal Budget	$10,000	1-3 years	High
Description: Establish an ordinance for a long-term tree maintenance program that includes regular necessary trimming and removal of trees to reduce the risk of damage from fallen tree limbs on roads and nearby power lines during severe storm and high wind events. The program also includes a tree study that evaluates tree species that contribute to wildfire fuel, assesses the feasibility of prescribed burns, and provides guidance on the appropriate landscaping mitigation actions to create defensible space.							

MULTI-JURISDICTIONAL

MULTI-HAZARD MITIGATION PLAN

VILLAGE OF WASHINGTONVILLE
JURISDICTIONAL ANNEX

IEM

2025
ORANGE COUNTY

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Village of Washingtonville Annex

This section presents the jurisdictional annex for the Village of Washingtonville. The jurisdiction's governing body passed a formal resolution to participate in this multijurisdictional hazard mitigation plan (MJHMP) update. A copy of their resolution is maintained at the local government offices and at the Orange County Emergency Services Center.

Contact Information

Table 1 provides the contact information for this plan.

Table 1: Jurisdiction's Points of Contact

Name	Title	Jurisdiction
Tom DeVinko	Mayor	Village of Washingtonville

Jurisdictional Profile

Population

The 2023 U.S. Census reported a population of 5,655 people (approximately 2,200 people per square mile) for the Village of Washingtonville, down from 5,737 (1.40%) in the 2020 census.

Location

The Village of Washingtonville is located in the central portion of Orange County and within the northern region of the Town of Blooming Grove. The village encompasses an area of 2.5 square miles and is located at the junction of State Routes 94 and 208.

Brief History

Washingtonville was first settled in 1731 and originally called Matthews Field. In 1818, the village was renamed in honor of President George Washington. The development of the New York, Lake Erie, and Western Railway prompted growth within the village during the mid-1800s. In 1895, the Village of Washingtonville was incorporated. The village also contains America's oldest winery, the Brotherhood Winery.

Governing Body

The Village of Washingtonville's governing body consists of a Village Mayor and a four-member Board of Trustees.

Growth and Development Trends

The Village of Washingtonville 2023 Comprehensive Plan for land use and zoning considerations has identified the following initiatives to decrease vulnerability to flooding and increase open spaces:

- Zoning map changes: Revised to reflect existing land uses where appropriate. For example, an area zoned R-M has been developed for single-family residential uses. The front of the parcels is in the R-100 zone, and the R-M zone essentially consists of wetland area on the back of the parcels, to be zoned R-100.
- Rezoning of open spaces: There are numerous properties owned by the Village of Washingtonville that form open spaces between residential neighborhoods, which will be considered for formal rezoning as open spaces. This will include any homeowner association lands set aside as open spaces or recreational areas for residential developments.
- Rezoning of manufactured homes: A large R-MHC zone, shown on Federal Emergency Management Agency (FEMA) maps as within the Moodna Creek floodway or within the 100-year floodplain, is to be rezoned. Given the flooding damage that has occurred to the mobile homes in Washingtonville Manor, Brookside Acres, and Silver Maples manufactured housing communities, some consideration will be given to eliminating any new housing from areas within the 100-year floodplain or floodway.[1]

A review of the planning board agenda from the Village of Washingtonville's municipal website indicates that there have been several planning board meetings held regarding future development. These projects include:

- Completion of drainage work on Emerson Drive and Seacord Lane (grant funded)
- Kings Capitol Construction Wastewater Treatment Plant (project funded at $174,858)
- Open bids for North Street drainage project
- Completed drainage project at 30 and 32 Decker Drive, Rera Court, Waterford Circle at Woodfield, and paving on Lincoln Drive
- Sewell Park Engineering floodplain management project
- MS-4 Engineering Storm Water Management project

Mitigation concerns have been addressed through site plan reviews and compliance with the village's comprehensive plan, local hazard mitigation plans, and local laws, policies, and procedures.

[1] Village of Washingtonville, 2024, "2023–2024 Comprehensive Plan Baseline Inventory and Analysis-Land Use and Zoning Considerations," https://www.washingtonville-ny.gov/wp-content/uploads/2024/03/2023-2024-Baseline-Inventory-and-Analysis.pdf

Redevelopment in hazard-prone areas will transition from industrial to residential/commercial uses over time and will also continue to follow local rules and regulations, New York State (NYS) building codes, New York State Department of Environmental Conservation (NYSDEC) stormwater management, and NYSDEC wetland protection regulations, as well as New York State Department of Transportation (NYSDOT) permitting.

Public Involvement

Continued public involvement is imperative to the overall success of the plan's implementation. The update process provides an opportunity to solicit participation from new and existing stakeholders, publicize mitigation success stories, and seek additional public comment. The plan maintenance and update process will include continued public and stakeholder involvement and input through attendance at designated committee meetings, web postings, press releases to local media, and public hearings.

Figure 1 displays how the public was encouraged to attend a public meeting at Orange County Emergency Services Center on November 21, 2024, as well as the survey used to gather information from the Village of Washingtonville's community members. The draft plan was posted on the jurisdiction's website for 30 days, where the village could solicit feedback from the public on a user-friendly form or survey.

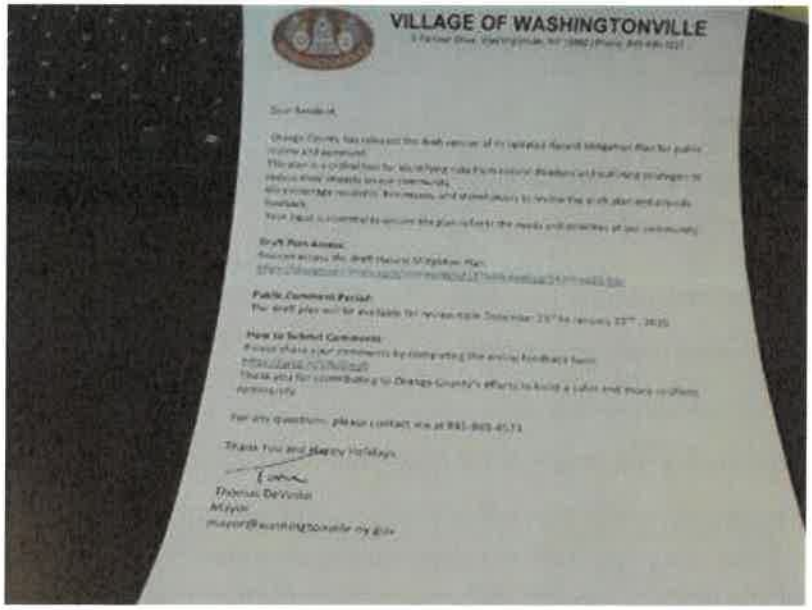


Figure 1: Village of Washingtonville Public Invitation Outreach

Public Involvement Process for Annual Reviews

The public will be notified using the village's website or any other publicly accessible social platform (e.g., local newspaper, Facebook, X) well in advance of any public meetings or comment periods.

Public Involvement in Five-Year Updates

When the plan is ready for its five-year update, the jurisdictions will coordinate with all participating stakeholders. The jurisdiction will develop a plan for public involvement and be responsible for disseminating information through various media channels detailing the update process. As part of this effort, public meetings will be held and public comments will be solicited on the plan update draft.

Previous Plan Integration

Integration into Local Planning Mechanisms

Incorporating the underlying principles of the MJHMP and its recommendations into other plans is a highly effective and low-cost way to expand their influence. All plan participants will use existing methods and programs to implement hazard mitigation actions where possible. As previously stated, mitigation is most successful when incorporated into the daily functions and priorities of government and public service. This plan builds on the momentum developed through previous and related planning efforts and mitigation programs, and it recommends implementing actions, where possible, through these other program mechanisms. These existing mechanisms include:

- Regulatory capabilities
- Administrative capabilities
- Fiscal capabilities

Implementation and incorporation into existing planning mechanisms will be conducted by respective planning stakeholders and through the following routine actions:

- Monitoring other planning/program agendas
- Attending other planning/program meetings
- Participating in other planning processes
- Monitoring community budget meetings for other community program opportunities

The successful implementation of this plan will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community. Regular efforts should be made to monitor the progress of mitigation actions implemented through other planning mechanisms. Where appropriate, priority actions should be incorporated into planning updates. Existing planning mechanisms in which the MJHMP has been integrated are listed in Table 2.

Table 2: Previous Plan Integration for the Village of Washingtonville

Type of Plan	Integration Method
Capital Improvement Budget	Hazard mitigation actions will be considered while developing annual capital improvement plans. Compliance with mitigation goals and objectives and the site's hazard vulnerability will also be considered during the evaluation of infrastructure and facilities projects.
Operating Budget	Hazard mitigation actions are to be considered within day-to-day operating budgets as funding permits.
Building & Zoning Ordinances	Review of the hazard mitigation plan (HMP) and hazard analyses is part of the evaluation of land use, zoning, and development review ordinances and permitted processes.
Comprehensive Land Use Plan	Such elements as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.
Grant Applications	Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the HMP.
Fire Plan	Fire plans for the municipality and local fire departments can use data and mapping in the HMP.

The plan must also identify the local planning mechanisms where the updated hazard mitigation information/actions may be integrated. The plan must describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms.

Table 3: Future Types of Plans That the Village of Washingtonville Can Use for Mitigation Actions

Type of Plan	Integration Method
Capital Improvement Budget	Hazard mitigation actions will be considered while developing annual capital improvement plans. Compliance with mitigation goals and objectives and the site's hazard vulnerability will also be considered during the evaluation of infrastructure and facilities projects.
Operating Budget	Hazard mitigation actions are to be considered within day-to-day operating budgets as funding permits.
Building & Zoning Ordinances	Review of the hazard mitigation plan (HMP) and hazard analyses is part of the evaluation of land use, zoning, and development review ordinances and permitted processes.

Type of Plan	Integration Method
Comprehensive Land Use Plan	Such elements as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.
Human Resource Manual	Employee job descriptions may contain elements related to hazard mitigation planning and associated recommendations.
Grant Applications	Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the HMP.
Fire Plan	Fire plans for the municipality and local fire departments can use data and mapping in the HMP.
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 and educational opportunities.
Economic Development	Local chambers of commerce and other economic development agencies can use the HMP to better inform new/expanding businesses in finding suitable locations.

Critical Facilities Information

Table 4 provides information on critical facilities located within the floodplain for the Village of Washingtonville. Identifying critical facilities in flood-prone areas is crucial for effective emergency planning and risk management. By understanding the potential impact of flooding on these facilities, local authorities can develop proactive strategies to mitigate risks and ensure the safety and functionality of these important assets during flood events. This information is valuable for decision-making and resource allocation for emergency response and preparedness efforts.

Table 4: Critical and Essential Facilities Located in the Village of Washingtonville

Facility Name	Address	Facility Type	Located in 1% or 0.2% Flood Event Chance Area?	Protected to a 0.2% chance flood event?	Associated Mitigation Action
Frontier Communications	Unknown	Communication Infrastructure	Y	N	VW-2 (Flood Study)
Little Harvard Childcare	83 E Main St,	School	Y	N	VW-2 (Flood Study)

Facility Name	Address	Facility Type	Located in 1% or 0.2% Flood Event Chance Area?	Protected to a 0.2% chance flood event?	Associated Mitigation Action
Vern Allen Park	Ahern Boulevard	Park	Y	N	VW-2 (Flood Study),
Washingtonville Department of Public Works Garage	1 Walt Cole Boulevard	Government	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Department of Public Works Sewer	3 Walt Cole Boulevard	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Fire Department	89 E. Main Street	Fire Station	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Middle School	38 W. Main Street	School	Y	N	VW-2 (Flood Study)
Washingtonville Pediatrics	10 Weathervane Dr	Health	Y	N	VW-2 (Flood Study)
Washingtonville Sewage Treatment Plant	2 Walt Cole Blvd	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Village Hall	9 Fair Lawn Dr	Government	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)
Washingtonville Water Plant	Conklin Way	Water	Y	N	VW-2 (Flood Study), VW-13 (Retrofits/Elevation)

Jurisdiction/Public Identified Vulnerabilities

Table 5: Village of Washingtonville Identified Vulnerabilities

Vulnerable Assets	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
People	
Low-Income Families	Economic instability can make it difficult for these families to access resources or recover from disasters.
Elderly Residents	Seniors may face mobility challenges and health issues, hindering their evacuation during emergencies.
Individuals with Disabilities	They may require specific support services and can face barriers to transportation and assistance during crises.
Structures	
Older Housing Stock	Many homes in Unionville are older and may not meet current building codes, thereby increasing vulnerability to natural disasters.
Small Commercial Buildings	These structures often lack the structural reinforcement needed for severe weather conditions, making them vulnerable to destruction or significant damage.
Economic Assets	
Local Businesses	Small businesses can be particularly vulnerable to economic downturns, natural disasters, and changes in consumer behavior.
Natural, Historic, and Cultural Resources	
Water Resources	Local water bodies and wetlands could be impacted by flooding, which can lead to contamination and habitat loss.
Historic Buildings	Structures may not meet modern building codes, making them vulnerable to severe weather events, such as heavy snowfall.
Cultural Sites	Sites that hold community significance may be placed at risk through flooding or extreme weather, which can damage artifacts and impair access.
Critical Facilities and Infrastructure	
Utilities	Water, electricity, and gas services can be disrupted by storms or flooding, affecting the entire community. Vulnerabilities come from aging infrastructure and proximity to flood zones.
Emergency Services	Fire stations, hospitals, and police facilities may be in low-lying, flood-prone areas, impacting their ability to respond during disasters.
Community Activities	

Vulnerable Assets	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
Public Gatherings	Parks and community centers are often used for events and can become inaccessible during severe weather, hindering community cohesion and activities.
Transportation Systems	Roads and bridges may experience damage or flooding, which can isolate communities during and after an event, delaying emergency response.
Are there any other assets that you can think to include? None	

Hazard Identification Specific to Jurisdiction

Orange County has a history of natural hazard events. During the 2025 Hazard Mitigation Plan (HMP) planning process, Orange County selected natural hazards that have impacted or could potentially impact the county. The Village of Washingtonville did not identify any technological hazards during this planning process but did identify seven natural hazards that impact the municipality, as shown in Table 6.

Table 6: Village of Washingtonville Natural Hazards

Hazards of Prime Concern
Drought
Earthquakes
Extreme Temperatures
Floods
Severe Thunderstorms
Severe Winter Storms
Wildfires

- Landslides, tornadoes, hurricanes/tropical storms, and ice jams are not profiled due to their lower susceptibility to events.
- Technological hazards will not be profiled in the HMP for the Village of Washingtonville.

Hazard Risk Assessment

After the identification of the hazards of concern, they were then reviewed to analyze the probability of future events, their consequences, and their maximum probable extent. This risk assessment helps to systematically identify which hazards are of the most concern for each jurisdiction. For further information about these and other identified hazards, please refer to the hazard profiles.

Table 7: Hazard Ranking for the Village of Washingtonville

Rank of Risk	Probability of Future Events	Consequence	Maximum Probable Extent
Droughts	Medium	Medium	Minor
Earthquakes	Low	Medium	Minor
Extreme Temperatures	Medium	Low	Medium
Floods	Medium	High	Major
Severe Thunderstorms	Medium	Medium	Medium
Severe Winter Storms	High	Medium	Medium
Wildfires	Medium	Medium	Medium

The following terms are used to describe the hazard consequence, the probability of future occurrence, and the maximum probable extent.

Probability of Future Events

The probability of future events is pulled from the likelihood categories of the 2022 County Emergency Preparedness Assessment (CEPA). All jurisdictions reviewed Orange County's results. If they disagreed with the likelihood of future events, they reflected those results in Table 7.

- **Very Low:** This event is not expected to occur within this county.
- **Low:** There is the potential for this event to occur, but it is very unlikely within the next 50 years.
- **Medium:** This event could occur within the next 20 years, but it generally does not happen with any regular frequency in this county (natural/accidental hazards), and current intelligence does not indicate that it is an imminent threat (for terrorism).
- **High:** It is likely that this event will occur in this county within the next 5 years, based on historical precedence (natural/accidental hazards) or current intelligence reporting (terrorism threats).
- **Very High:** This event is expected to occur within the next year, without question, based on historical precedence in this county (natural/accidental hazards) or current intelligence reporting (terrorism threats).

Consequence

The hazard consequence is pulled from the 2022 CEPA. All jurisdictions reviewed Orange County's results, and if they disagreed with the category, they reflected those results in Table 7.

- **Very Low:** This event would cause virtually no impact on the county's people, responders, property, and economy.

- **Low:** The impact of this event would be minimal on the county's people, responders, property, and economy; response could generally be conducted without mutual aid.
- **Medium:** The impact of this event would be noticeable on the county's people, responders, property, and economy; mutual aid would likely be needed from other counties and/or the state.
- **High:** The impact of this event would be very significant on the county's people, responders, property, and economy; significant mutual aid resources would be called in from surrounding counties, the state, and the federal government.
- **Very High:** This event would have a devastating (or potentially catastrophic) impact on the county's people, responders, property, and economy; all mutual aid networks (local, state, and federal) would be immediately utilized, and government functions would be severely or wholly compromised.

Maximum Probable Extent

The magnitude/strength of a hazard event uses the scale reported in Table 8:

- **Minor:** Limited classification on scientific scale, slow speed of onset, or short duration of event.
- **Medium:** Moderate classification on scientific scale, moderate speed of onset, or moderate duration of event.
- **Major:** Severe classification on scientific scale, fast speed of/immediate onset, or long duration of event.

Table 8: Hazard Extent for Village of Washingtonville

Hazard	Minor	Medium	Major
Drought	Presence-Sensing Device Initiation (PSDI) -1.99 to 1.99+	PSDI -2.00 to -2.99	PSDI -3.00 to -5.00
Earthquakes	Mercalli Scale: I–V; Richter Scale: 0–4.8	Mercalli Scale: VI–VII; Richter Scale: 4.9–6.1	Mercalli Scale: VIII–XII; Richter Scale: 6.2–8.1+
Extreme Temperatures	Heat Index: 80°F–105°F Cold Temperature: 40°F–35°F Wind chill 36°F–17°F	Heat Index: 105°F–129°F Cold Temperature: 30°F–15°F Wind chill 25°F to -4°F	Heat Index: >130°F Cold Temperature: 15°F to -20°F Wind chill -7°F to -98°F
Floods	Outside of 100-yr and 500-yr flood zones, Zones A, AE, X	500-yr flood zone, Zone X	100-yr flood zone, Zone AE
Severe Thunderstorms	Hail: H0–H4, 5–40mm; Wind Force: 0–3; Knots: <1–10;	Hail: H5–H6, 30–60mm; Wind Force: 4–6; Knots: 11–27; LAL: 3–4	Hail: H7–H10, 50–>100mm; Wind Force: 7-12;

Hazard	Minor	Medium	Major
	Lightning Activity Levels (LAL): 1–2		Knots: 28–64+; LAL: 5–6
Severe Winter Storms	Temperature: 40°F–35°F Wind chill: 36°F–17°F	Temperature: 34°F–15°F; Wind chill: 25°F to -4°F	Temperature: 15°F to -20°F; Wind chill: 7°F to -98°F
Wildfires	Keetch-Byram Drought Index (KBDI): 0–200	KBDI: 200–500	KBDI: 500–800

Hazard Impact

Table 9 includes a list of possible impacts for the Village of Washingtonville. However, it is hard to predict a hazard's possible impact on a community given the magnitude, intensity, and land use trends.

Table 9: Hazard Impacts for the Village of Washingtonville

Hazard	Impact
Droughts	• Property damage • Loss of water supply • Increase in grassfire potential and intensity • Negative impact on citizens, including water restrictions and lack of drinkable water supply • Impact on car washes, parks, and pools
Earthquakes	• Injury or death • Property and infrastructure damage • Water contamination or loss from broken pipes • Transportation and communication disruption or damage • Increase in traffic accidents • Building collapse • Natural gas leak • Displaced residents • Power outages • Damage to the natural environment, including protected species and critical habitats
Extreme Temperatures	• Heatstroke/hypothermia or death • Property damage • Loss of water supply • Increased grassfire potential and intensity • Impact on logistics • Power outages • Road buckling

Hazard	Impact
	• Disruption in critical infrastructure operations • Vehicle engine failure
Floods	• Loss of electricity • Loss, or contamination, of water supply • Loss of property • Structure and infrastructure damage: flooded structures and eroded roads • Displaced residents • Snake migration and increase of mosquitoes • Fire: as a result of loss of water supply • Debris in transportation paths • Emergency response delays • Disruption of traffic that can impact the economy • Damage to the natural environment, including protected species and critical habitats
Severe Thunderstorms	• Property damage to fences, vehicles, equipment, and roofs • Transportation delays • Injuries and deaths • Debris from trees and damaged property • Electrical grid problems • Communication problems: downed phone and internet lines • Damage to the natural environment, including protected species and critical habitats
Severe Winter Storms	• Structural damage • Injuries or death • Power outages • Inability to use roads for driving • Increased traffic accidents • Loss of heat • Stranded travelers, motels/hotels at full capacity • Tree debris creates fuel load for fire hazard • Delayed emergency response time • Frozen/burst pipes, leading to loss of water • Disruption of traffic • Impacts on the economy • Reduced communications capabilities
Wildfires	• Injury or death • Property and fence damage • Road closure • Traffic accidents • Loss of power – burning utility poles

Hazard	Impact
	• Loss of property • Structure and infrastructure damage • Displaced residents • Loss of resources • Damage to the natural environment, including protected species and critical habitats

Hazard Event History

The following, taken from the National Centers for Environmental Information, are natural hazard events (organized by location and date) that occurred in the Village of Washingtonville between 2019 and 2024.

Table 10: Historical Events in the Village of Washingtonville Since 2019

Location	Date	Event Type	Deaths	Injuries	Property Damage	Crop Damage
Village of Washingtonville	9/1/2021	Flash flood	0	0	$0	$0
Village of Washingtonville	9/8/2023	Hail	0	0	$0	$0

Drought

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there is no record of drought that has explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Climate change has been anticipated to possibly increase the frequency and intensity of droughts in NYS. Warmer temperatures will increase evaporation and reduce surface water levels, leading to drier soil. Additionally, the variability of precipitation may increase, meaning there will be more periods of either extreme or little-to-no precipitation, with the latter potentially spurring a drought. Currently, climate change has yet to meaningfully affect drought occurrence in New York. Moreover, drought frequency in the northeast has stayed relatively constant, decreasing only slightly. Models have shown that increases in temperature have been counteracted by rises in humidity, resulting in negligible impacts to drought

trends in the northeast between 1980–2020. The extent to which increases in humidity are caused by global climate change versus more localized environmental effects remains unclear.[2]

Earthquakes

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there is no record of earthquakes having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Earthquakes are unlikely to be affected by climate change, due to their causes being largely unaffected by its resultant atmospheric changes. There are some indications that earthquakes became more frequent as glaciers melted thousands of years ago, and more common earthquakes in Greenland may be tied to warming temperatures, but the links between these phenomena and anthropogenic climate change are uncertain at best and have yet to affect New York. Earthquakes are not discussed in local, regional, or national climate impact assessments, highlighting that climate change is not expected to impact their frequency or intensity in the U.S.

Extreme Temperatures

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there are no records of extreme temperatures having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

The northeast is warming faster than many other U.S. regions. Accordingly, extreme cold events will likely become less frequent and have already become milder and less severe for much of North America in general and the northeast in particular. High-profile severe cold events have still occurred in recent years, but this is likely due to natural variability. Between 1900–2017, New York City has seen a clear decline in cold days, defined as when the minimum temperature is equal to or less than the 10th percentile of the daily minimum temperature of a given year. The impacts of climate change on the duration of individual cold waves are currently uncertain.

Climate change will significantly increase the frequency, severity, and duration of extreme heat events, including multi-day events, in every state region, with an expected corresponding increase in impacts without adequate adaptation. NYS is expected to see a five-fold increase in heat-wave days by 2050. By

[2] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

that same year, different regions of NYS are projected to experience between 11–30 additional days above 90°F per year, above the 1981–2010 baseline. The number of extreme heat events (periods of three or more days above 90°F) per year in different regions is expected to rise from a baseline of zero to two per year (1981–2010) by an additional one to four per year by the 2050s.

In areas where heat events currently occur less frequently, extreme heat impacts become more frequent and widespread by the middle of the century. For example, the Saint Lawrence Valley historically experiences one to two extreme heat events per decade but is expected to observe two to three events per year by 2050. Due to the relatively rapid change in the frequency, severity, and duration of extreme heat events, NYS will experience new impacts, while existing ones may be significantly exacerbated if no adaptive measures are taken. The New York State Energy Research and Development Authority's (NYSERDA) Climate Impacts Assessment (CIA) projects changes in heat-related extremes across 12 regions, each described in Figure 2. The CIA provides projections for the following heat-related extremes: days over 90°F, days over 95°F, number of heat waves, average length of heat waves, maximum heat index, days heat index is over 85°F, and days heat index is over 95°F. For the purposes of this hazard profile, days over 95°F, number of heat waves, and average length of heat waves are included as they align most closely with State Hazard Mitigation Plan (SHMP) data and definitions. For more information on the CIA's projections, including projections for every decade through the 2080s, see NYS Climate Impacts Assessment. By the 2050s, different regions of NYS are projected to experience an additional 5–46 days above 90°F per year above their 1981–2010 baselines.

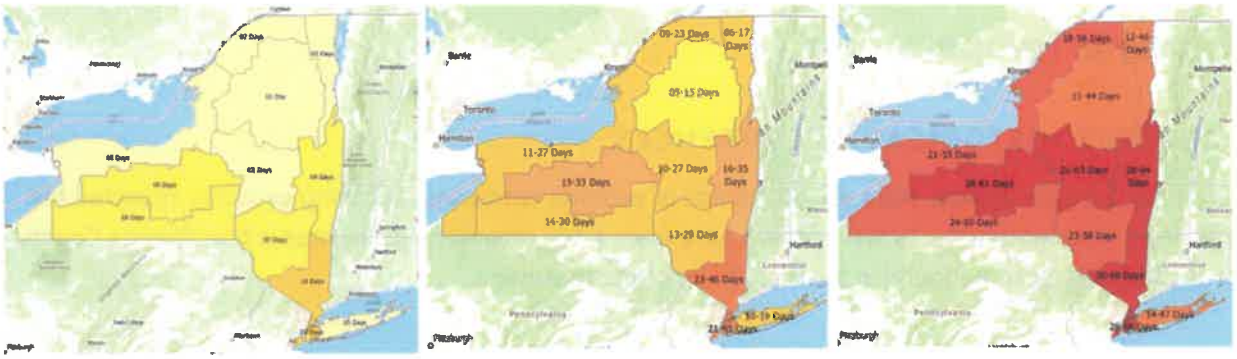


Figure 2: New York State Heat Projections by CIA Region

Left: Number of days above 90°F during the base period (1981–2010)

Middle: Additional days above 90°F by the 2050s, showing middle range (25th–75th percentile) 30-year mean values from model-based outcomes

Right: Additional days above 90°F by the 2080s, showing the middle range of values[3]

[3] "New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate," New York State Energy Research and Development Authority, Climate Impacts Assessment. https://nysclimateimpacts.org/

Floods

Flooding in Washingtonville results from snowmelt, heavy rains, or other weather conditions. By identifying flood-prone areas, it is possible to restrict development to open space uses, including passive recreation and agricultural uses, which do not obstruct water flows and are tolerant of flooding. FEMA has identified potential flood hazard areas in the Village of Washingtonville along the Moodna Creek, as shown on FEMA maps. In total, only 11 percent of the county area lies within high or moderate flood risk zones, according to the current Flood Insurance Rate Map (FIRM). The Village of Greenwood Lake has the highest proportion of its area within a high flood risk zone, followed by the Town of Goshen. The City of Port Jervis has the highest proportion of land within moderate flood risk zones, followed by the Village of Washingtonville.

PREVIOUS HISTORICAL OCCURRENCES

- March 8, 2008: Numerous flooded basements had to be pumped out in residential areas of Middletown and Washingtonville. Route 78 near Aspin Road/Wisner Avenue was also closed due to flooding.
- March 13–31, 2010: A nor'easter produced an extended period of heavy rainfall across the area on March 13, causing widespread flooding across portions of southeast New York. Moodna Creek and other small streams exceeded their banks in the Village of Washingtonville and caused numerous houses to be inundated with water. 1.63 inches of rain fell in the Village of Washingtonville. Heavy rain caused flooding. Widespread flooding in the village damaged private properties, school facilities, the police station, village offices, the fire department, and recreation facilities.
- March 7, 2011: Heavy rainfall resulted in moderate-to-major flooding across portions of southeast New York. In the Village of Washingtonville, the banks of Moodna Creek overflowed, causing flooding for first-floor residents and businesses on Route 208, as well as on Route 94 near Washingtonville High School. Rainfall totals measured 0.5 inches in the Village of Washingtonville.
- August 26–September 5, 2011: Heavy rain caused widespread flooding, which damaged private properties, school facilities, the police station, village offices, the fire department, and recreation facilities. The banks of Moodna Creek overflowed, requiring water rescues at Udderly Fresh Farms on Route 94 near Farmview Lane in the Village of Washingtonville. In addition, the raging waters from the creek burst holes in the foundations of houses.
- September 9, 2011: The remnants of Tropical Storm Lee brought a new round of flooding and hardship for those still coping with the damage caused by Hurricane Irene. Heavy rain began to fall across the region by 2:00a.m., adding 2–4 inches of precipitation to saturated ground, strained infrastructure, and swollen waterways. The Village of Washingtonville was again cut off from all routes except Route 208, and officials evacuated the Brookside Acres and Washingtonville Manor mobile home parks. Schools were closed or dismissed early across the region as municipalities declared states of emergency, most of them for a second time in as many weeks. The Orange County Government Center, which had only just reopened on Tuesday after having been closed the previous week because of damage from Hurricane Irene, shut down again Thursday afternoon.

- September 1, 2021: Extremely heavy rainfall associated with the remnants of Hurricane Ida overspread southeast New York during the evening of September 1 and continued through the early morning hours of September 2. Rainfall totals ranged from 5–8 inches across much of the region, with most of the rain falling in just a few hours. Ultimately, 17 people died as a result of the flash flooding, including 13 in New York City and 4 in the Lower Hudson Valley. Mountain Lodge Road in Washingtonville was closed due to flooding.

IMPACT OF CLIMATE CHANGE[4]

Climate change will increase the probability of extreme flood events. Given that projected climate change will affect the frequency and intensity of flood events, its impacts will likely change recurrence intervals. In one study focused on New York City, modeling showed that a 0.2 percent Annual Chance Flood in preindustrial times would see its return period shorten to roughly five years by 2045 due to climate change. The size of these events is also projected to change. For example, the study projected that a 0.2 percent Annual Chance Flood, which resulted in 11 feet of flooding above the mean tide level in 1970–2005, would cause 13–16.7 feet of flooding above the mean tide level by 2080–2100. Climate change will increase both the occurrence and severity of extreme flooding events.

Climate change will primarily affect flooding in New York through changing precipitation patterns and sea-level rise. Climate change directly affects precipitation and, with it, flooding. Extreme precipitation events have become more common as temperatures have warmed due to the increased capacity of warm air to hold water. Precipitation has increased across the northeast in all seasons, while the heaviest precipitation events have risen by 60 percent since 1958, leading to more frequent flood events. Going forward, precipitation is generally expected to increase in frequency, intensity, and duration, while extreme precipitation events will also become more common. This will lead to more flooding across the state. Meanwhile, sea levels are rising faster along New York's coast than the global mean—a phenomenon linked directly to climate change. Sea-level rise has significant implications for storm surge, high-tide flooding, and other coastal flood-related hazards.

The Intergovernmental Panel on Climate Change (IPCC) projects that short-duration, high-intensity rainfall, which causes flash flooding, is likely to increase in the northeastern U.S. due to climate change. However, localized increases in short-duration extreme rainfall may be heightened beyond what would be expected from temperature increase alone, possibly due to convective cloud feedback with uncertain links to climate change. The "flashiness" of flash floods, a metric for the speed and volume of flood events, may also increase due to climate change. In the northeast, it is unclear whether there will be significant changes in the duration of flash flood events, but there are likely to be increases in both the volume and peak rates of rainfall. This means that flash flood events could dump more water in shorter or unchanged amounts of time—with potentially grave impacts for affected communities. The extreme rainfall events made more frequent and intense by climate change will make urban flooding more likely, as already overburdened or insufficient drainage and infiltration systems become further overwhelmed.

[4] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

NYSERDA's CIA projects changes in extreme precipitation events across 12 regions. The CIA provides projections for the following precipitation-related extremes: days with over 1, 2, and 4 inches of precipitation. The CIA also has data on changes in annual precipitation that are not included in this profile. For more information on the CIA's projections, including projections for every decade through the 2080s, see the NYS Climate Impacts Assessment.[5]

Severe Thunderstorms

PREVIOUS HISTORICAL OCCURRENCES

September 8, 2023: Thunderstorms developed along a stalled boundary and moved through southeast NYS in an environment with 3,000–4,000 J/kg of (surface-based convective available potential energy) SBCAPE. Some of these storms were severe and produced damaging winds and large hailstones.

IMPACT OF CLIMATE CHANGE

Climate change will potentially increase the size and intensity of hailstones and hailstorms but will reduce their frequency in North America. This holds true in the northeast, where the overall number of hail days is projected to drop, along with small- and medium-sized hail events. Nonetheless, in the northeast, models show that very large hailstones will become more common. Ultimately, while hail is projected to become less frequent but more severe, these models remain uncertain. Effects of climate change on the duration of hail events, if any, are uncertain at this time.

Research on how climate change may affect lightning is limited. One model projected that the number of lightning strikes in the U.S. will increase by 12 percent for every degree increase in global average air temperatures. A more recent study in Europe projected that the impacts of climate change on lightning would be location-specific, with some areas experiencing more lightning strikes and others less, largely based on latitude. While projections of changes to intensity and duration remain limited, one study suggested that long-continuing-current lightning flashes—intense lightning flashes that are longer in duration and more likely to spark fires than other types of lightning—may become more common, though not significantly so in the northeast. Ultimately, while specific impacts to lightning remain uncertain, lightning occurs more frequently in warmer temperatures, meaning that it would be reasonable to expect an increased level of lightning occurrence with projected climate change. As of early 2023, there was no clear change in lightning frequency or intensity in the U.S. While there have been an increasing number of lightning-caused fires in the west, this has largely been due to dry conditions rather than to a change in the frequency or intensity of the lightning itself.[6]

[5] "New York State Climate Impacts Assessment: Understanding and Preparing for Our Changing Climate," MitigateNY, https://nysclimateimpacts.org/

[6] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

Severe Winter Storms

Winter storms create damage due to snowfall and winds, with occasional sleet, freezing rain, or hail occurring. Snowfall impairs visibility, obstructs roadways and facilities, and causes tree limbs to fall and roofs to collapse due to excess weight. It also creates slick roadways, which can be compounded further by sleet or freezing rain events. Washingtonville experiences the effect of severe winter storms frequently.

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there are no records of winter storms having explicitly impacted the Village of Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

In the northeast, while snow events may become less common and snow seasons may be shorter due to higher average temperatures, extreme snowstorms (including lake-effect snowstorms) may increase in frequency relative to historical levels. However, as warming continues to increase, this trend may not hold toward the end of the century. One study suggested that, while snowstorms will likely become less common due to atmospheric warming, when temperatures are sufficiently cold, they will produce more snow than has historically been the case. Climate-linked changes to snowstorm duration are unclear at this time. Many areas in the northeast have seen record snowstorm events in recent years. The relative increase in extreme snowstorm events over the past decades has been linked to climate change.[7]

Wildfires

PREVIOUS HISTORICAL OCCURRENCES

Since the last plan update, there are no records of wildfires that have explicitly impacted Washingtonville. However, there have been a few recorded occurrences within Orange County. This information can be found in the main body of the document.

IMPACT OF CLIMATE CHANGE

Wildfires are directly impacted by climate change. Climate change will lead to warmer temperatures and drought conditions, which create an environment ripe for fires, particularly in the western United States.[8]

[7] Ibid.
[8] Center for Climate and Energy Solutions, https://www.c2es.org/content/wildfires-and-climate-change/

Rising Temperatures

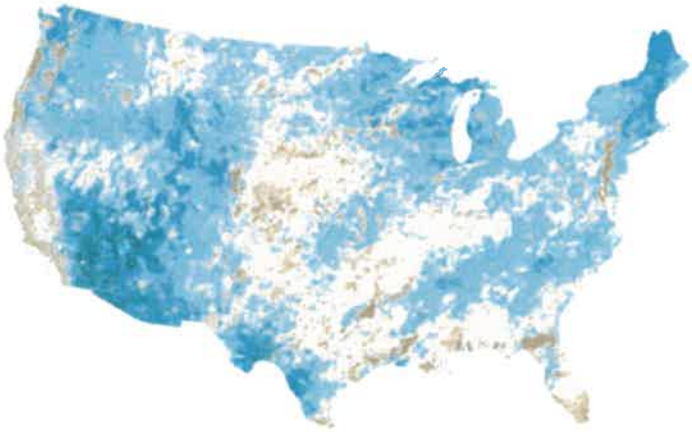
Rising average temperatures increase the rate of evaporation in dense wilderness areas, causing soil and vegetation to dry more quickly and become flammable.

Change in temperature (°F) in 30 years

1% 2% 3% 4%

Source: Eagle Rock Analytics, based on the NOAA Real-Time Mesoscale Analysis (RTMA) 2011-2020 hourly time series and adjusted to future conditions using the RCP 4.5 emissions scenario.

Figure 3: Rising Temperatures in the United States



Changing Precipitation

Changing precipitation patterns are exacerbating dry seasons in areas prone to wildfires, causing burns to become more frequent and severe.

Precipitation change in 30 years

-10% -5% 0% 5% 10%

Source: Eagle Rock Analytics, based on the NOAA Real-Time Mesoscale Analysis (RTMA) 2011-2020 hourly time series and adjusted to future conditions using the RCP 4.5 emissions scenario.

Figure 4: Changing Precipitation in the United States Due to Climate Change[9]

[9] First Street, "Changing Precipitation Trends are Drying Already Vulnerable Areas," https://firststreet.org/environmental-changes/fire

Information on climate change's impacts on wildfire frequency, intensity, duration, and location in New York State is currently limited. Generally, climate change is not expected to make wildfires a significant hazard of concern in New York. While wildfire occurrence is projected to increase in New York, baseline occurrence levels are so low that this increase is not expected to have a meaningful effect. Impacts on the duration and intensity of wildfires in New York are currently unclear, although the start and peak of wildfire season may occur earlier in the year.[10]

National Flood Insurance Program Summary

The Village of Washingtonville has been a participant in the National Flood Insurance Program (NFIP) (ID# 360638) since 1973. Details of NFIP policies within the Village of Washingtonville are provided in Table 11. Continued compliance with NFIP requirements is expected for the Village of Washingtonville. Mapped flood zones are illustrated in Figure 5.

[10] "New York State Hazard Mitigation Plan," 2023, https://mitigateny.org/

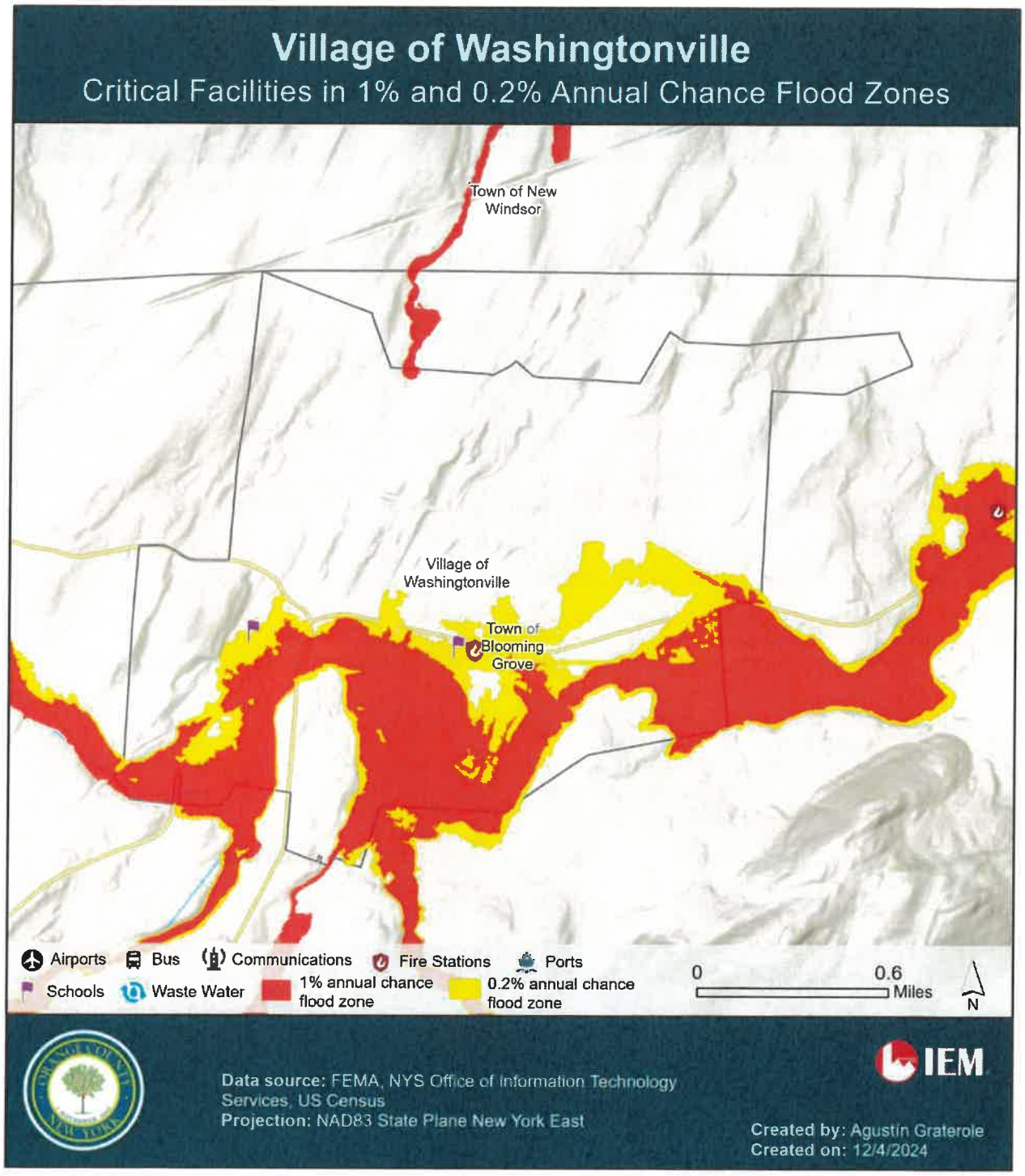


Figure 5: Mapped Flood Zones for the Village of Washingtonville

The NFIP questions in Table 11 were answered to the best of the Village of Washingtonville's ability.

Table 11: NFIP Floodplain Management Capabilities and Compliance

Floodplain Management	
Who is the floodplain manager? Is this their primary or secondary role?	Building Inspector and Engineer
Does the floodplain manager have adequate training and capacity for their role? If not, what else is needed?	Yes, none currently
How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?	Following NYS floodplain P&P and issuing floodplain permits.
When was the community's most recent Community Assistance Visit (CAV)?	Do not know
Were any violations noted on the community's most recent CAV?	Do not know
Is there an upcoming CAV? If not, is one needed?	No
When was the most recent floodplain management ordinance adopted?	1987
Does your community participate in the Community Rating System (CRS)? If so, describe the steps the community has taken to achieve the CRS goals.	No
Does the community's floodplain management ordinance include any higher standards? If so, please list.	No
Who is responsible for permitting?	Building Dept
How does the community issue development permits in the special flood hazard area?	Yes
Does the community maintain elevation certificates?	Yes
Does the community track the number of buildings in the special flood hazard area? If yes, are there any trends?	Yes, just started in August, and no trends at this time.
How many repetitive loss (RL) structures does the community have? (List number and type of structure.)	37 residential
How many severe repetitive loss (SRL) structures does the community have? (List number and type of structure.)	0
Have any RL/SRL properties been mitigated since the last plan update?	Yes, 28 homes for a FEMA buyout
Who is responsible for making substantial damage/substantial improvement determinations?	Building Dept

Floodplain Management	
How does the substantial damage/substantial improvement process work in your community?	Visual on-site inspection and then a written follow-up
Is there sufficient staff and training to make substantial damage/substantial improvement determinations?	Yes
How are substantial damage/substantial improvement requirements messaged to the public before and after an event?	Communication system announcements
Have any substantially damaged/substantially improved structures been mitigated since the last plan update?	Yes
How will the community remain in compliance with the NFIP moving forward? (Simply stating "the community will continue to comply with the NFIP" will not meet FEMA's planning requirements.)	To evaluate each project to make sure that all FEMA floodplain requirements are being met

Floodplain Mapping	
How does the community support map change requests? This could be requests during the Risk MAP process or through Letters of Map Amendment or Revision.	Through collection requests and reviewed by our Village engineer and building dept.
When did the latest Flood Insurance Rate Map (FIRM) become effective?	2009
When was the latest FIRM adopted?	Unsure
Is the FIRM and Flood Insurance Study (FIS) report in an accessible location? How would the public get access to their flood map information?	Do not know if the documents exist. In most cases, we use the FEMA website to access floodplain maps
Does the community use any Risk MAP products? If so, describe.	No
Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?	No
Other comments?	NA

Flood Insurance and Outreach	
How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?	Through available information from FEMA, we then disseminate throughout our community

Flood Insurance and Outreach	
How does the community engage with insurance agents on flood insurance?	Yes
Does the community (or state) have flood hazard disclosure laws?	No
How familiar is the public with their flood insurance options?	Limited; the most effective is when they are buying their home, they are notified the house requires flood insurance
How many properties have flood insurance in the community?	Unknown
Are there any areas where flood insurance is lacking?	Unknown; we have not seen any data related to this subject
Other comments?	NA

Table 12 illustrates the value of property in the Village of Washingtonville that is located within the 500-year floodplain and categorized by land use type. This table was derived from FEMA floodplain mapping and parcel data from the Orange County Property Assessor.

Table 12: Flood Hazard Analysis for the Village of Washingtonville

Parcel Count with Structures	# in Hazard Area	Value ($) in Community (In millions)
Residential	202	$50.5
Commercial	299	Unknown
Industrial	0	$0
Agricultural	4	Unknown
Religious/Non-profit	1	Unknown
Government	6	Unknown
Education	2	Unknown
Utilities	0	$0
Dams	0	$0
Parks	1	Unknown
Total	515	**$50.5**

Capability Assessment

Local mitigation capabilities are essential for reducing the impact of hazards on communities. Local authorities can effectively mitigate hazards by leveraging existing authorities, policies, programs, and resources. These capabilities encompass a range of strategies, such as land-use planning, building codes and enforcement, public education and outreach, infrastructure protection, and natural resource protection. Through collaboration with various stakeholders, including emergency management agencies, public works departments, and environmental organizations, local communities can implement comprehensive disaster mitigation efforts. The following tables provide the Village of Washingtonville's capabilities.

Planning and Regulatory Capability

A series of jurisdiction capability assessment forms were provided to the community to identify the local mitigation capabilities already in place within the Village of Washingtonville. These policies, programs, and resources can reduce hazard impacts and support the implementation of hazard mitigation activities. Table 13 and Table 14 provide the Village of Washingtonville's planning and regulatory capabilities, such as the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Table 13: Assessment of the Planning Capabilities of the Village of Washingtonville

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
General Plan	Yes	Unknown	Unknown
Capital Improvement Plan	N/A	N/A	N/A
Climate Change Adaptation Plan	N/A	N/A	N/A
Community Wildfire Protection Plan	N/A	N/A	N/A
Economic Development Plan	N/A	N/A	N/A
Land Use Plan	N/A	N/A	N/A
Local Emergency Operations Plan	Yes	Unknown	Unknown
Stormwater Management Plan	Yes	Unknown	Unknown
Transportation Plan	N/A	N/A	N/A

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
Substantial Damage Plan	N/A	N/A	N/A
Downtown Strategic Plan	N/A	N/A	N/A
Waterfront Revitalization Plan	N/A	N/A	N/A
Other? (Describe)			

Table 14: Assessment of the Regulations and Ordinances Capabilities of the Village of Washingtonville

Regulation/ Ordinance	Does this regulation/ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Building Code	Yes	N/A	N/A
Flood Insurance Rate Maps	Yes	Unknown	Unknown
Floodplain Ordinance	Yes	Unknown	Unknown
Subdivision Ordinance	Yes	Unknown	Unknown
Zoning Ordinance	Yes	Zoning code currently being revied for updates	In progress
Natural Hazard-Specific Ordinance (Stormwater, Steep Slope, Wildfire)	N/A	N/A	N/A
Acquisition of Land for Open Space and Public Recreation Use	Yes	Currently reviewing	Unknown
Prohibition of Building in At-Risk Areas	N/A	N/A	N/A
Other? (Describe)			

Administrative and Technical

Administrative and technical capabilities include staff and their skills, as well as tools that can aid in performing mitigation actions.

Table 15: Assessment of the Administrative Capabilities of the Village of Washingtonville

Administrative Capability	In Place? (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Chief Building Official	Yes	Yes	Yes	Yes
Civil Engineer	Yes	Yes	Unknown	Unknown
Community Planner	Yes	Unknown	Unknown	Unknown
Emergency Manager	No	N/A	N/A	N/A
Floodplain Administrator	Yes	Yes	Yes	Yes
Geographic Information System (GIS) Coordinator	No	N/A	N/A	N/A
Planning Commission	No	N/A	N/A	N/A
Fire Safe Council	No	N/A	N/A	N/A
Community Emergency Response Team (CERT)	No	N/A	N/A	N/A
Active Voluntary Agencies Active in Disasters (VOADs)	No	N/A	N/A	N/A
Other?				

Table 16: Assessment of the Technical Capabilities of the Village of Washingtonville

Technical Capability	In Place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
Mitigation Grant Writing	Yes	Unknown	Unknown
Hazard Data and Information	No	N/A	N/A
Geographic Information System (GIS)	Yes	Unknown	Unknown
Mutual Aid Agreements	No	N/A	N/A
Other? (Please describe)			

Financial

Financial capabilities refer to the resources used to fund mitigation actions. Discussing funding and financial capabilities is important to determine what kinds of projects are feasible given their cost. Mitigation actions, such as outreach programs, have lower costs and often use staff time and existing budgets. Other actions, such as earthquake retrofits, could require substantial funding from local, state, and federal partners. Partnerships, including those willing to donate land, supplies, cash, or in-kind matches, can also be included.

Table 17: Assessment of the Financial Capabilities of the Village of Washingtonville

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Capital Improvement Project Funding	Yes	Unknown	Unknown	Unknown
General Funds	No	N/A	N/A	N/A
Hazard Mitigation Grant Program (HMGP/404)	No	N/A	Yes	No

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Building Resilient Infrastructure & Communities (BRIC)	No	N/A	Yes	No
Flood Mitigation Assistance (FMA)	No	N/A	Yes	No
Public Assistance Mitigation (PA Mitigation/406)	No	N/A	Yes	No
Community Development Block Grant (CDBG)	Yes	Unknown	Yes	No
Natural Resources Conservation Service (NRCS) Programs	No	N/A	No	N/A
U.S. Army Corps of Engineers (USACE) Programs	No	N/A	No	N/A
Property, Sales, Income, or Special Purpose Taxes	Yes	Unknown	Unknown	Unknown
Stormwater Utility Fee	No	N/A	No	N/A
Fees for Water, Sewer, Gas, or Electric Services	Yes	Unknown	Unknown	Unknown
Impact Fees from New Development and Redevelopment	Yes	Unknown	Unknown	Unknown
General Obligation or Special Purpose Bonds	Yes	Unknown	Unknown	Unknown
Federal-funded Programs (Please Describe)	No	N/A	No	N/A

Funding Resource	In Place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
State-funded Programs (Please Describe)	Yes	Unknown	Unknown	Unknown
Private Sector or Non-profit Programs	No	N/A	No	N/A
Other?				

Education and Outreach

Education and outreach capabilities are programs and methods to encourage and provide information on risk-reduction strategies. These programs may be run by a participant or community-based partner. Partners, especially those who support underserved communities, can help identify additional education and outreach capabilities.

Table 18: Assessment of the Education and Outreach Capabilities of the Village of Washingtonville

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)	No	N/A	
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)	No	N/A	
Public Meetings/Events (Please describe)	Yes	Unknown	In the event of a weather crisis, the village sends out notifications over our community notification system.
Emergency Management Listserv	No	N/A	
Local News	No	N/A	

Education and Outreach Capability	In Place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)	No	N/A	
Insurance Disclosures/Outreach	Yes	Unknown	When materials are available from different agencies
Organizations that Represent, Advocate for, or Interact with Underserved and Vulnerable Communities (Please Describe)	No	N/A	
Social Media (Please Describe)	Yes	Unknown	Part of the notification system
Other? (Please Describe)			

Opportunities to Expand and/or Improve Capabilities

Actions that can expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting for mitigation actions, passing policies and procedures for mitigation actions, adopting and implementing stricter mitigation regulations, approving mitigation updates, and making additions to existing plans as new needs are identified and recognized. None provided by jurisdiction.

Table 19: Capabilities to Expand or Improve in the Village of Washingtonville

Capability	Opportunity to Expand and/or Improve
Planning and Regulatory	• Our community is currently in the process of completing a Comprehensive Plan review and updating our zoning code rewrite. We are only two and half square miles with only one parcel of 155 acres available for development. This property has a large portion of flood way and 100, 500-year flooding zones. • In our planning process, we have attempted to keep our bedroom community zoning the same with some slight changes in our residential office and business zoning. Our community has been affected by recent major flooding twice in 2011 and 2021. We have executed evacuations in several areas that have a high flood risk. Due to many factors of development upstream and with federal agencies

Capability	Opportunity to Expand and/or Improve
	not allowing any stream maintenance, our situation will only worsen over time.
Administrative and Technical	• Our building department is overseeing floodplain management along with our engineers. Due to new Village board members, it would be a priority to offer annual training for new staff and board members to understand technical and administrative responsibility.
Financial	• From a financial standpoint, we could use additional assistance with grant opportunities. We are very limited on what we can do with budget increases without causing additional hardship on our residents.
Education and Outreach	• We have reached out to our residents when we receive any information through social media and our website. If local seminars in person or via Teams/Zoom, etc., would be a huge assistance, since I think this information should come from the agencies in charge of disbursements. • We do use a communications system to advise our residents of critical and informational announcements.

Mitigation Strategy

Mitigation Goals

All jurisdictions in Orange County have elected to adopt the same goals.

- Promote disaster-resistant development.
- Build and support local capacity to enable the public to prepare for, respond to, and recover from disasters.
- Reduce the possibility of damages and losses to government-owned assets, including buildings, infrastructure, and protected land.
- Reduce the possibility of damage and losses from all hazards of concern.
- Enhance public safety and reduce flood risks by addressing vulnerabilities associated with high-hazard potential dams.
- Prioritize reaching vulnerable populations by targeting outreach strategies and inclusive communication methods.

Prioritization of Mitigation Activities

The STAPLEE method (which examined social, technical, administrative, political, legal, economic, and environmental criteria) is vital for hazard mitigation planning due to its provision of a structured,

comprehensive approach to prioritizing actions based on their feasibility, impact, and alignment with community goals. By examining the aforementioned criteria, the STAPLEE method ensures that chosen actions are not only effective at reducing hazard risks but are also practical to implement and sustain. This method emphasizes balancing costs with benefits, ensuring that resources are allocated to the most impactful actions. Furthermore, STAPLEE promotes community support and stakeholder buy-in, as it prioritizes actions that reflect local values and gain political backing. This holistic approach ultimately fosters more resilient communities, as mitigation actions chosen through the method are better integrated into local frameworks and supported over the long term. The STAPLEE method prioritizes hazard mitigation based on the following criteria:

1. **Social:** Assesses public support and potential impacts on the community. It considers whether an action aligns with community values and avoids disproportionately affecting any group.
2. **Technical:** Evaluates whether the action is technically feasible and effective in reducing future losses without creating new issues. This ensures that solutions address root causes rather than symptoms.
3. **Administrative:** Reviews available resources, staffing, and maintenance needs to determine whether the jurisdiction is able to implement and sustain the action.
4. **Political:** Considers political and stakeholder support, including commitments from local leaders and champions, to ensure the action has a stable foundation for success.
5. **Legal:** Confirms the legal authority to perform the action, checking whether current laws and regulations support it or if any changes are necessary.
6. **Economic:** Weighs the action's costs against its financial benefits and impact on the local economy, favoring cost-effective solutions that fit within budget constraints.
7. **Environmental:** Considers the environmental impact, ensuring the action aligns with sustainability goals and complies with federal laws, such as the National Environmental Policy Act (NEPA), especially when federal funding is involved.

Previous Mitigation Activities

Table 20: Previous Mitigation Activities for the Village of Washingtonville

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-1	**Hazard Mitigation Plan Update**	All hazards	Village Board, Village Clerk, Village Consultant Engineer, Village Building Inspector with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget FEMA planning grants	Unknown	Long-term	High	Carried forward
Description: Continue to support the implementation, monitoring, maintenance, and updating of this Plan.								
VW-2	**Hydraulic analysis of the Moodna Creek**	Flood	Village Board, NY Rising – Washingtonville Planning Committee, Town of Blooming Grove Board, GOSR	Operating Budget	Unknown	Long-term	High	Carried forward
Description: Pursue a hydraulic analysis of the Moodna Creek as it has numerous bridges and structures that represent present and potential constrictions due to the design and location of structures. The results of this analysis will be used as a resource in the planning and development of further actions to reduce flood impacts.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-3	**Adoption and Enforcement of Floodplain Management Program**	Flood, Severe Storm	Village Board, Village Consultant Engineer, Village Building Inspector, NYSDEC, FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Maintain compliance with and good standing in the National Flood Insurance Program (NFIP), including adoption and enforcement of floodplain management requirements (e.g., regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives. **VW-7 and VW-13**								
VW-4	**Tree Trimming Program**	Severe Storm	Village Building Inspector	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.								
VW-5	**Mutual Aid Agreements**	All hazards	Village Board, with support from Orange County, NYSDHSES, and surrounding communities	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-6	**Backup Power permit fee waiver**	Severe Storm	Village Board	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Implement permit fee waivers for installation of backup power for private property.								
VW-7	**Obtain and archive elevation certificates**	Flood, Severe Storm	Village Building Inspector and Village Consultant Engineer	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Obtain and archive elevation certificates.								
VW-8	**Update Comprehensive Emergency Management Plans**	All hazards	Village Board, Local Emergency Manager, Village Police, Washingtonville Fire District, Blooming Grove EMS, with support from Orange County Emergency Services	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Support ongoing updates of Comprehensive Emergency Management Plans								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-9	**Improved structure and facility inventories and hazard datasets**	All hazards	Village Consultant Engineer, Local Emergency Manager, Orange County Hazard Mitigation Plan Coordinator, Moodna Creek Alliance	FEMA Mitigation Grant Programs with Local Match	Unknown	Long-term	Medium	Carried forward
Description: Participate in local, county, and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment and hazard mitigation. Projects include, but will not be limited to, installing automatic level-sensing devices on streams and lakes to provide for early warning of potential flooding, developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS), which could be used for various planning and emergency management purposes.								
VW-10	**Zoning Ordinances**	All hazards	Village Board, Village Planning Board, Village Zoning Board of Appeals with support from Orange County	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas.								
WV-11	**Develop flood damage assessment database**	All hazards	Village Board and Village Clerk with support	Municipal Budget	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			from Orange County					
Description: Develop programs/procedures to capture and archive loss data from events. Examples include recording location and length of roadway closures; developing a database of residential and commercial property damage, including permit history for such repairs; high water marks, perhaps painting phone poles with high water marks and/or regulatory Base Flood Elevations (BFEs).								
VW-12	**Installation of staff gauges and automatic level sensing devices**	Flood	Village Engineer, Watershed Planning Groups, County OEM, NYSDEC	FEMA Mitigation Grant Programs with Local Match	Unknown	Long-term	Medium	Carried forward
Description: Research, purchase, install, and maintain a system of staff gauges and automatic level-sensing devices to be placed in appropriate areas (Main Street pedestrian bridge and South Street Bridge) to determine flood height of the Moodna Creek. The gauges should be readable from a certain distance and should enable volunteer spotters and the public to monitor stream height.								
VW-13	**Floodplain Administration**	Flood	Village Board, Village Building Inspector, Village Consultant Engineer, Local Emergency Manager with support from Orange County, NYSDEC and FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Promote the participation of Floodplain Administrators within the planning process and other activities.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-14	**Training and Certification Damage Assessment Programs**	All hazards	Various Village Officials with support from Orange County	Municipal Budget, FEMA, HMA and HLS grant programs	Unknown	Long-term	Medium	Carried forward
Description: Work with regional agencies (i.e., county and NYSDHSES) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g., code officials, floodplain managers, engineers). This action includes training of Emergency Personnel in ICS systems, as called for in the Town of Blooming Grove and Village of Washingtonville Emergency Response Plan.								
VW-15	**Regulations on underground utilities**	Severe Storm	Village Board	Municipal Budget	Unknown	Long-term	Low	Carried forward
Description: Adopt regulations for undergrounding utilities in new developments and install electric lines underground where possible throughout the village.								
VW-16	**Disaster Recovery Consulting Services**	All hazards	Village Board with support from Orange County Emergency Management, NYSDHSES and FEMA	Municipal Budget	Unknown	Long-term	Low	Carried forward
Description: Identify and develop agreements with entities that can provide support with FEMA/NYSDHSES paperwork after disasters; qualified assessment personnel to improve post-disaster capabilities, such as damage assessment; FEMA/NYSDHSES paperwork compilation, submissions, and record-keeping.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-17	**Relocation of critical facilities**	Flood	Village Board and support from NYSDHSES, FEMA	FEMA Mitigation Grants	Unknown	Long-term	High	Carried forward
Description: Relocate emergency and governmental services outside of floodplain. Plans to construct a new Village Hall are currently being considered by village officials.								
VW-18	**Elevation of structures**	Flood, Severe Storms	Village Board in cooperation with the Town of Blooming Grove Town Board; support from Orange County Government, GOSR, Elected State and Federal Representatives, NYSDHSES, FEMA	FEMA Mitigation Grants	Unknown	Long-term	High	Carried forward
Description: Assist in the purchase, relocation, or elevation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority, including acquisition of private residences. Phase 1: Identify appropriate candidates based on cost-effectiveness. Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability. Projects for immediate action include the private residence in the Tappan Subdivision, supporting acquisition of severe repetitive loss properties on E. Main Street and Cardinal Drive, and the relocation of emergency and governmental services outside of floodplain.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-19	**Education and Public Awareness Programs**	All hazards	Village Board, Local Emergency Manager, NY Rising Washingtonville Planning Committee with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget, HMA programs with local or county match	Unknown	Long-term	Medium	Carried forward
Description: Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: • **Conduct educational outreach to owners of important water resources facilities.** • **Educate property owners in stream maintenance.** • **Provide and maintain links to the HMP website and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.** • **Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.** • **Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.** • **Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.**							
VW-20	**Backup power installation education**	Severe Storm	Village Building Inspector	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Provide public education and outreach on proper installation and/or use of backup power								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-21	**NOAA Storm Ready Program**	Severe Storm	Village Board and Local Emergency Manager with support from Orange County Emergency Management, NYSDHSES, and FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Enhance the village's resilience to severe (winter) storms by joining the NOAA "Storm Ready" program and supporting communities in joining the program								
VW-22	**Compile and update MS4 ID list for stormwater discharges**	Flood	Village Board, Village DPW, Moodna Creek Alliance, with support from Town of Blooming Grove Town Board	Municipal Budget, Volunteer	Unknown	Long-term	Medium	Carried forward
Description: Work with DPW to compile and/or update the existing list of MS4 ID illicit stormwater discharges within the Town of Blooming Grove and the Village of Washingtonville. Both the Town and Village of Washingtonville are MS4 stormwater communities. This would involve identifying point source discharges to the Moodna or feeder streams, NOT including sheet flow, or non-point source pollution. While non-point source pollution is now the chief source of stream pollution, the importance of the point source for flooding is flow rate, which is higher than non-point source flow since infiltration and friction are far lower. Work with DPW to document the effects of discharges, and where and how often they occur.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-23	**Drainage Improvements study**	Flood	Village Board, Village Consultant Engineer, and Village DPW	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	High	Carried forward
Description: Facilitate drainage improvements throughout the village. Phase 1 will include a study and concept design								
VW-24	**Stormwater storage study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek Alliance, U.S. Army Corp of Engineers (USACE), New York State	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	High	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Department of Environmental Conservation (NYSDEC), Federal Emergency Management Agency (FEMA)					
Description: Explore the possibility of stormwater storage along Moodna Creek. The village will participate in an oversight committee to address stormwater storage in Moodna Creek. At present, there are ongoing discussions with the science and data subcommittee with the Moodna Creek Watershed Inter-Municipal Council regarding potential locations for storage. Consider excavation of former Washingtonville Village Hall as potential flood water storage location.								
VW-25	**Dam removal study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Alliance, USACE, NYSDEC, FEMA					
Description: Elimination/modification of existing dams, including dams at Tomahawk Lake and Salisbury Mills, in accordance with the Moodna Creek Watershed Plan; small dam in Washingtonville, approximately where the Moodna Creek runs behind the Hook & Ladder; and the Mays Field municipal site is located on the other side of the dam where stream bank erosion occurs — the dam cannot be seen at normal flow, but during dry weather it can be observed. Phase 1 of this initiative would involve an in-depth study of the costs, benefits, and impacts of dam removal.								
VW-26	**Flood proofing of water/wastewater facility**	Flood	Village Board, Village Consultant Engineer, Village DPW, NYSDHSES, and NYSDEC	Municipal Budget HMA Programs with Local or County Match	Unknown	Long-term	Medium	Carried forward
Description: Flood proofing of water/wastewater facility: The village wastewater facility is currently in construction with H2M but not designed to be flood proof to withstand a 500-year flood event.								
VW-27	**Debris Removal from Moodna Creek**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove	Municipal Budget	Unknown	Long-term	Medium	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
			Town Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA					
Description: Consider debris removal from Moodna Creek, including identifying the location, and potential removal, of beaver dams in the creek.								
VW-28	**Dredging projects study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR, and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget, HMA Programs with Local or County Match	Unknown	Long-term	Low	Carried forward
Description: Continue to explore dredging opportunities. Reports have been prepared for potential dredging operations, although permits for the projects have been delayed, meaning they have not progressed.								

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
VW-29	**Salisbury Mill Hydroelectric Dam modification**	Flood	Town of Blooming Grove Town Board, Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee with support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget	Unknown	Long-term	Medium	Carried forward
Description: Modification of Salisbury Mill hydroelectric dam to control creek water level.								
VW-30	**Improve communication systems, emergency notification system**	All hazards	Village Board and Town Board, Local Emergency Manager; support from Orange County Emergency Services, NYSDHSES, and FEMA	Municipal Budget	Unknown	Long-term	High	Carried forward

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority	Progress
Description: Improve communication systems, including the development of a town-wide emergency notification system. This action should follow the finalization of the Town of Blooming Grove's Emergency Alert System Plan (currently under development).								
VW-31	**Generators for critical facilities**	All hazards	Village Board, Village Police Department, Village Consultant Engineer, Village DPW with support from NYSDHSES and FEMA	Municipal Budget	Unknown	Long-term	High	Carried forward
Description: Obtain and install backup power sources at critical facilities, including a portable generator for Washingtonville Police Station to provide service throughout the village.								

2025 Proposed Mitigation Activities

Table 21: 2025 Proposed Mitigation Activities for the Village of Washingtonville

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-1	**Plan Integration of Updated Hazard Mitigation Plan Risk Assessment and Mitigation Strategy into Existing**	Drought, Earthquake, Extreme Temperatures, Flood, Severe Thunderstorms,	Village Board, Village Clerk, Village Consultant Engineer, Village Building	Municipal Budget FEMA planning grants	$10,000	3–5 years	High

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
	Planning Mechanisms	Wildfire, Severe Winter Storms	Inspector with support from Orange County Government, NYSDHSES, FEMA				
Description: Integrate the updated Hazard Mitigation Plan into comprehensive plans, building codes, etc.							
VW-2	**Hydraulic analysis of the Moodna Creek**	Flood	Village Board, NY Rising – Washingtonville Planning Committee, Town of Blooming Grove Board, GOSR	Operating Budget	$50,000	3–5 years	High
Description: Pursue a hydraulic analysis of the Moodna Creek, which contains numerous bridges and structures that represent present and potential constrictions due to their design and location. The results of this analysis will be used as a resource in the planning and development of further actions to reduce flood impacts.							
VW-3	**Adoption and Enforcement of Floodplain Management Program**	Flood, Severe Thunderstorm	Village Board, Village Consultant Engineer, Village Building Inspector, NYSDEC, FEMA	Municipal Budget	$5,000	3–5 years	Medium
Description: Maintain compliance with and good standing in the National Flood Insurance Program (NFIP), including adoption and enforcement of floodplain management requirements (e.g., regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives.							
VW-4	**Tree Trimming Ordinance Program**	Severe Thunderstorm	Village Building Inspector	Municipal Budget	$10,000	3–5 years	Medium
Description: Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability and service continuity.							
VW-5	**Mutual Aid Agreements for Post-Disaster Substantial Damage Estimation**	Drought, Earthquake, Extreme Temperatures, Flood, Severe Thunderstorms, Wildfire, Severe Winter Storm	Village Board, with support from Orange County, NYSDHSES, and surrounding communities	Municipal Budget	$500	3–5 years	Medium
Description: Create/enhance/maintain mutual aid agreements with neighboring communities for supporting substantial damage estimation activities in compliance with the local flood damage prevention ordinance.							
Description: Implement permit fee waivers for the installation of backup power for private property.							
VW-6	**Obtain and archive elevation certificates**	Flood, Severe Thunderstorm	Village Building Inspector and Village Consultant Engineer	Municipal Budget	$1,000	3–5 years	Medium
Description: Obtain and archive elevation certificates.							
VW-7	**Improved structure and facility inventories and hazard datasets**	Flood	Village Consultant Engineer, Local Emergency Manager,	FEMA Mitigation Grant Programs with Local Match	$10,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Orange County Hazard Mitigation Plan Coordinator, Moodna Creek Alliance				
Description: Participate in local, county, and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment and hazard mitigation. Projects include, but will not be limited to, installing automatic level-sensing devices on streams and lakes to provide early warning of potential flooding; developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS), which could be used for various planning and emergency management purposes.							
VW-8	**Zoning Ordinances in SFHA**	Flood	Village Board, Village Planning Board, Village Zoning Board of Appeals with support from Orange County	Municipal Budget	$5,000	3–5 years	Medium
Description: Incorporate ordinances and/or zoning restrictions to control and mitigate future development within Special Flood Hazard Areas.							
WV-9	**Develop hazard damage assessment database**	Flood, Severe Thunderstorms, Severe Winter Storm	Village Board and Village Clerk with support from Orange County	Municipal Budget	$10,000	3–5 years	Medium
Description: Develop programs/procedures to capture and archive loss data from events. Examples include recording location and length of roadway closures; developing a database of residential and commercial property damage, including permit history for such repairs; high water marks, perhaps painting phone poles with high water marks and/or regulatory Base Flood Elevations (BFEs).							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-10	**Moodna Creek Water Surface Elevation Monitoring for Flood Mitigation Planning**	Flood	Village Engineer, Watershed Planning Groups, County OEM, NYSDEC	FEMA Mitigation Grant Programs with Local Match	$20,000	3–5 years	Medium
Install and ensure the operation of the Moodna Creek flood gauge to provide a source of best available data and inform localized data-driven hazard mitigation planning for flood.							
VW-11	**Floodplain Administration**	Flood	Village Board, Village Building Inspector, Village Consultant Engineer, Local Emergency Manager with support from Orange County, NYSDEC and FEMA	Municipal Budget	$5,000	3–5 years	Medium
Description: Promote the participation of Floodplain Administrators within the planning process and other activities.							
VW-12	**Regulations on underground utilities**	Earthquake, Severe Storm	Village Board	Municipal Budget	$75,000	3–5 years	Low
Description: Adopt regulations for undergrounding utilities in new developments and install electric lines underground where possible throughout the village.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-13	**Flood Protection Project for critical facilities to include retrofits and elevation feasibility study**	Flood	Village Board and support from NYSDHSES, FEMA	FEMA Mitigation Grants	$4,000,000	3–5 years	High
Description: Install retrofits within the governmental services buildings to protect from possible flooding events. Feasibility study for structural elevation and/or flood barriers.							
VW-14	**Floodproofing (non-residential), Relocation, Elevation, Demolition of Structures**	Flood, Severe Thunderstorm	Village Board in cooperation with the Town of Blooming Grove Town Board; support from Orange County Government, GOSR, Elected State and Federal Representatives, NYSDHSES, FEMA	FEMA Mitigation Grants	$1,000,000	3–5 years	High
Description: Assist in the purchase, relocation, or elevation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as a priority, including acquisition of private residences. Phase 1: Identify appropriate candidates based on cost-effectiveness. Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability. Projects for immediate action include the private residence in the Tappan Subdivision, supporting acquisition of severe repetitive loss properties on E. Main Street and Cardinal Drive, and the relocation of emergency and governmental services outside of the floodplain.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-15	**Flood Mitigation Education and Public Awareness Programs**	Drought and Flooding	Village Board, Local Emergency Manager, NY Rising Washingtonville Planning Committee with support from Orange County Government, NYSDHSES, FEMA	Municipal Budget, HMA programs with local or county match	$10,000	3–5 years	Medium
Description: Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: • **Conduct educational outreach to owners of important water resources facilities, including water conservation and stream maintenance.** • **Provide and maintain links to the HMP website and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.** • **Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.** • **Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.** • **Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.**						
VW-16	**Backup power installation education**	Severe Storm, Winter Storms	Village Building Inspector	Municipal Budget	$5,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
Description: Provide public education and outreach on proper installation and/or use of backup power.							
VW-17	**NOAA Storm Ready Program**	Severe Thunderstorm	Village Board and Local Emergency Manager with support from Orange County Emergency Management, NYSDHSES, and FEMA	Municipal Budget	$15,000	3–5 years	Medium
Description: Enhance the village's resilience to severe winter storms by joining the NOAA "Storm Ready" program and supporting communities in joining the program.							
VW-18	**Compile and update MS4 ID list for stormwater discharges**	Flood	Village Board, Village DPW, Moodna Creek Alliance, with support from Town of Blooming Grove Town Board	Municipal Budget, Volunteer	$30,000	3–5 years	Medium
Description: Work with DPW to compile and/or update the existing list of MS4 ID illicit stormwater discharges within the Town of Blooming Grove and the Village of Washingtonville. Both the Town and Village of Washingtonville are MS4 stormwater communities. This would involve identifying point source discharges to the Moodna or feeder streams, NOT including sheet flow, or non-point source pollution. While non-point source pollution is now the chief source of stream pollution, the importance of the point source for flooding is flow rate, which is higher than non-point source flow since infiltration and friction are far lower. Work with DPW to document the effects of discharges, and where and how often they occur.							
VW-19	**Drainage Improvements study**	Flood	Village Board, Village	Municipal Budget, HMA	$40,000	3–5 years	High

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Consultant Engineer, and Village DPW	Programs with Local or County Match			
Description: Facilitate drainage improvements throughout the village. Phase 1 will include a study and concept design.							
VW-20	**Stormwater storage study**	Flood	Village Board	Municipal Budget, HMA Programs with Local or County Match	$40,000	3–5 years	High
Description: Explore the possibility of stormwater storage along Moodna Creek. The village will participate in an oversight committee to address stormwater storage in Moodna Creek. At present, there are ongoing discussions with the science and data subcommittee with the Moodna Creek Watershed Inter-Municipal Council regarding potential locations for storage. Consider excavation of the former Washingtonville Village Hall as a potential flood water storage location.							
VW-21	**Dam removal study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town Board; support from Orange County, Moodna Creek	Municipal Budget, HMA Programs with Local or County Match	$170,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Alliance, USACE, NYSDEC, FEMA				
Description: Elimination/modification of existing dams, including the dams at Tomahawk Lake and Salisbury Mills, in accordance with the Moodna Creek Watershed Plan; the small dam in Washingtonville, approximately where the Moodna Creek runs behind the Hook & Ladder, and the Mays Field municipal site is located on the other side of the dam where streambank erosion occurs, and the dam cannot be seen at normal flow but can be observed during dry weather. Phase 1 of this initiative would involve an in-depth study of the costs, benefits, and impacts of dam removal.							
VW-22	**Flood proofing of water/wastewater facility**	Flood	Village Board, Village Consultant Engineer, Village DPW, NYSDHSES, and NYSDEC	Municipal Budget HMA Programs with Local or County Match	$1,000,000	3–5 years	Medium
Description: Flood proofing of the water/wastewater facility: The village wastewater facility is currently in construction with H2M but not designed to be flood proof to withstand a 500-year flood event.							
VW-23	**Flood Protection Project at Moodna Creek, Dredging Ordinance and Long-Term Flood Impacts Study**	Flood	Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee in cooperation with the Town of Blooming Grove Town	Municipal Budget	$30,000	3–5 years	Medium

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
			Board; support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA				
Description: Initiate a long-term dredge ordinance that includes a flood study and maintenance plan for the Moodna Creek, including identifying the location, and potential removal, of beaver dams in the creek, to reduce the flood impact to the area during flood events. By dredging the creek on schedule, the area will open up storage space and water flow.							
VW-24	**Salisbury Mill Hydroelectric Dam modification**	Flood	Town of Blooming Grove Town Board, Village Board, Village Consultant Engineer, Village DPW, GOSR and NY Rising Washingtonville Planning Committee with support from Orange County, Moodna Creek Alliance, USACE, NYSDEC, FEMA	Municipal Budget	$100,000	3–5 years	Medium
Description: Modification of the Salisbury Mill hydroelectric dam to control creek water level.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-25	**Improve communication systems, emergency notification system**	Earthquake, Extreme Temperatures, Floods, Severe Thunderstorms, Severe Winter Storms	Village Board and Town Board, Local Emergency Manager; support from Orange County Emergency Services, NYSDHSES, and FEMA	Municipal Budget	$40,000	3–5 years	High
Description: Improve communication systems, including the development of a village-wide emergency notification system. That would allow for notification on shelter openings given a catastrophic event for which life-saving decisions can be based.							
VW-26	**Installation of Alternative Energy Generation Equipment for critical facilities**	Extreme Temperatures, Severe Thunderstorms, Severe Winter Storms, Flood	Village Board, Village Police Department, Village Consultant Engineer, Village DPW with support from NYSDHSES and FEMA	Municipal Budget	$35,000	3–5 years	High
Description: Obtain and install backup power sources at critical facilities, including a generator for the Washingtonville Police Station to provide emergency power during power outages. The installation of a generator and associated accessory equipment to retrofit the structure's electrical system will provide energy backups for the continuity of operations for the community in the event of power loss during high wind severe storms and winter storms and flood events that can impact continuity of operations for critical facilities.							

#	Project Title	Hazard Addressed	Responsible Agency	Potential Funding Source	Cost Estimate	Timeframe	Priority
VW-27	**Wildland Vegetative Fuels Study and Ordinance**	Wildfire	Village Public Works	Municipal Budget	$10,000	1-3 years	High
Description: Establish an ordinance for a long-term tree maintenance program that includes regular necessary trimming and removal of trees to reduce the risk of damage from fallen tree limbs on roads and nearby power lines during severe storm and high wind events. The program also includes a tree study that evaluates tree species that contribute to wildfire fuel, assesses the feasibility of prescribed burns, and provides guidance on the appropriate landscaping mitigation actions to create defensible space.							