

10.2.31 Town of Tuxedo

This section presents the jurisdictional annex for the Town of Tuxedo.

10.2.31.1 Contacts

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

- Michael Rost – Town Supervisor
1 Temple Drive
Tuxedo Park, NY 10987
(845) 351-2265
- Robert Dollbaum – Highway Superintendent
984 Long Meadow Rd
Tuxedo Park, NY 10987
(845) 351-2594
- Shari A. Brooks – Supervisor’s Clerk
(845) 351-2265

10.2.31.2 Municipal Profile

Population

The 2010 census reported three thousand, six hundred twenty-four (3,624) residents for an 8.7% increase over the 2000 census of three thousand, three hundred thirty-four (3,334).

Location

Located in the southern portion of Orange County, the Town is situated with the Ramapo River and Harriman State Park to the east. Adjacent townships include Woodbury to the northeast, Monroe to the north, and Warwick to the west. To the southeast, it is bordered by the County of Rockland; a small portion also borders Passaic County in New Jersey.

Brief History

Originally settled by the Lenni-Lenape tribe, the Town took its name from the lake known to the natives as “Tusceto”. A large population of English and German colonists settled in the area in the 1700s to work at the nearby Stirling Iron Works in Ringwood, New Jersey. Originally part of Southfields (later renamed Monroe), the Town was separated from the Town of Monroe in 1889. The Town became a vacation destination, particularly with the creation of Tuxedo Park, a planned community developed in the 1880s as a hunting and fishing resort. The Town continued to attract wealthy residents; the term tuxedo for evening wear originated as a reference to the Town’s residents.

Governing Body

The Town is served by an elected Town Supervisor and a four (4) member elected Town Board. The positions of Town Clerk and Highway Superintendent are also elected positions.

Future Growth

The majority of the Town is designated as special recreation under current zoning laws. Future growth and development is limited to a few areas of medium-high density residential areas as well as a small light industrial area. A major development known as Tuxedo Farms has been in the planning process since 1989, covering over two thousand (2,000) acres in three tracts (southern tract-Southwest of Tuxedo Lake, Fox Mile to the south, and the Northern tract to the northeast). Over the years, this proposal has evolved and as of 2010 a revised special use plan was given for one thousand, one hundred ninety-five (1,195) residential units including no less than seven hundred and sixty-four (764) single family detached/semi-detached residences and no more than four hundred thirty-one (431) multi-family dwellings. The plan also allows for one hundred ninety-six thousand (196,000) square feet of commercial space, with no more than one hundred thousand (100,000) of that located on the Southern tract. As of 2016, earthwork on the site had begun but home construction had not yet been initiated.

Development of this scale precipitated the establishment of the 2010 revised special use plan for the Tuxedo Farms site which addressed mitigation measures for the highly sensitive terrain surrounded by parkland. Tuxedo Farms will be required to follow NYS building code, DEC stormwater management, and DEC wetland protection regulations and permitting as well as NYSDOT permitting.

10.2.31.3 Hazard Vulnerabilities and Ranking

Risk Ranking

The Town of Tuxedo selected the following hazards to address, seen in Table 10.2.31a. Vulnerability was decided based on frequency of occurrence and severity of impact.

Hazard Event	Vulnerability
Flood	Moderately High
Severe Storm/ Severe Thunderstorm	Moderately High
Extreme Temperatures	Moderately High
Hurricane	Moderately High
Earthquake	Moderately Low
Tornado	Moderately Low
Winter Storm	Moderately Low
Ice Storm	Moderately Low

Table 10.2.31a: Hazard Vulnerability By Event	
Hazard Event	Vulnerability
Drought	Moderately Low
Wildfire	Low
Ice Jam	Low
Landslide	Low

Critical Facilities

A list of community Critical Facilities was generated to aid in mitigation planning. The table below summarizes the number of these facilities within the Town of Tuxedo which may be impacted by any of the previously noted hazards.

This information was used to identify potential needed improvements to existing Critical Facilities. Critical facilities were identified by the Town as meeting this definition: “Any structure(s) and/or infrastructure within a community whose incapacity or destruction would:

- Have a debilitating impact on the defense or economic security of that community.
- Significantly hinder a community’s ability to recover following a disaster.”

Discretion was left up to the participating jurisdiction to select these facilities.

Table 10.2.31b: Critical Facility and Infrastructure Counts by Category				
Transportation Network	Water Supply Systems	Government Services	Emergency Services	Educational/ Shelter and Evacuation Facilities
-	-	1	4	2

Locations of the government building, emergency services, and educational facilities are noted below. None of these facilities are located within the 500-year floodplain.

Table 10.2.31c: Location of CFI	
Facility Name	Address
Government	
Town Hall	1 Temple Drive
Emergency Services	
Tuxedo Police	1075 Route 17
Tuxedo Volunteer Ambulance Service	1 Contractors Road
Sterling Forest Volunteer Fire Company	1664 Long Meadow Road
Tuxedo Park Fire Department	2 Contractors Road
Educational	
George F. Baker High School	1 Tornado Drive
George Grant Mason Elementary	11 Hillside Avenue

The Town of Tuxedo has eleven (11) critical facilities within the 500-year floodplain or the high hazard Landslide Rating¹ area. One (1) of these facilities are located in both. Below is a table that identifies the structures and hazard issues.

Table 10.2.31d: Town of Tuxedo Critical Facilities and Infrastructure in Hazard Areas			
Critical Infrastructure	500-Yr Floodplain	Landslide Rating Area	Associated Mitigation Action
Faire Partners LLC Dam	Y	N	N/A
Four Corners Pond Dam	Y	N	N/A
Hall Mill Pond Dam	Y	N	N/A
Indian Kill Reservoir Dam	Y	N	N/A
Island Pond Dam	N	Y	N/A
International Paper Fire Pond Dam	Y	N	N/A
Lake Cohasset Lower Dam	N	Y	N/A
Summit Brook Dam	N	Y	N/A
Tuxedo Falls Dam	Y	N	N/A
Indian Reservoir	Y	N	N/A
Tuxedo Police Department	N	Y	N/A

The Town of Tuxedo does not own or operate municipal potable water or wastewater treatment facilities. The Town utilizes the County for the provision of these services.

Table 2.8a – Orange County NPDES Data lists all wastewater facilities in the County, including the Town of Tuxedo, with a NPDES (National Pollutant Discharge Elimination System) permit. In the case of New York State, NPDES permit listing match State Pollutant Discharge Elimination System (SPDES) permit listings.

Priority Hazard Events

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

The probability of climate-related hazard events is generally expected to increase in the future within the Town of Tuxedo. This anticipated increase results from the expected increase in weather volatility associated with climate change. The Town's location on the Ramapo River also contributes to increased flooding occurrences.

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

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

Flood

The major hydrology influencing bodies for the Town are the Ramapo River, Tuxedo Lake, and Weewah Lake, a small lake just north of Tuxedo Lake fed by Warwick Brook.

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

Table 10.2.31e: Summary of Land Areas in Flood Hazard Areas (Source: HAZUS, FEMA DFIRM Data)			
Total Land Area (Acres)	100-yr Flood Risk Area	500-yr Flood Risk Area	Low Risk Flood Area
2,057	12 (1%)	-	2,044

Additionally, 0.6% of the Town’s improved value areas (defined as property that is either actively utilized or has been developed) are located within the high or moderate risk flood areas (99.4% is within low risk areas).

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

Table 10.2.31f: Structures in the Town of Tuxedo Vulnerable to 500-year Flood Events and Their Estimated Values		
Type of Structure	# Structures in Hazard Area	Value of Structures (in millions)
Residential	139	\$6.3
Commercial	6	\$0.5
Industrial	0	\$0
Agricultural	0	\$0
Religious/Non-profit	0	\$0
Government	1	\$0.1
Education	0	\$0
Utilities	0	\$0
Dams	6	Unknown
Parks	0	\$0
Total	152	\$6.9

Historical Occurrence:

Four (4) events were recorded specifically for the Town of Tuxedo, specifically in the Village of Tuxedo Park, within the past ten (10) years due to heavy rain events.

- March 7, 2011 – The East Village Bridge was closed in Tuxedo Park due to the high flow of the Ramapo River. High water levels caused flooding on the bridge which was closed to traffic and inhibited access into and out of certain parts of town.
- July 1, 2013 – Route 17 in Tuxedo Park was closed due to flooding.
- July 27, 2015 – Village Road was closed at Highway 17 in Tuxedo Park due to flash flooding.

Extreme Temperatures

For a description of this hazard, please see section 5.1.

Historical Occurrence:

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

Severe Storm/Severe Thunderstorm

The National Weather Service (NWS) defines a severe storm as one with a tornado and/or surface hail $\frac{3}{4}$ " or greater and/or wind gusts fifty (50) knots (kts) (58 mph) or greater. Such storms can cause damage from wind, hail, heavy rainfall, and/or lightning strikes.

Historical Occurrence:

Searching NOAA's Storm Events Database with the queries "Thunderstorm Wind", "High Wind", and "Hail" yielded one (1) event within and around the Town of Tuxedo.

- September 18, 2012 – A tree was reported down on Ridge Road.

It is important to note that these events generally affect large geographic areas and reports specific to municipalities aren't often recorded.

Hurricane/Coastal Storms

For a description of these hazards, please see section 5.3.

Historical Occurrence:

In the past ten (10) years there is no record of any Hurricanes that have explicitly impacted the Town of Tuxedo, however, there have been a number of recorded occurrences within Orange

County. The information can be found in the main body of the document. It is of note that hurricane threats could potential increase due to climate change trends.

Drought

For a description of this hazard, please see section 5.5.

Historical Occurrence:

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

Landslide

Landslides occur when a slope fails and moves downward due to gravity; this can be caused by anything that disrupts ground stability, from storms to acts of man. The New York State Geological Survey denotes areas with steep slopes and glacial lake clay soils as landslide vulnerable. There are areas within the Town of Tuxedo that meet these criteria. The Town has areas with steep slopes and ridgelines, some of which are generally wooded, increasing the probability for a potential landslide in the future. Analysis of critical facilities that fall into these high landslide rating areas can be found in Table 10.2.4d and in Attachment I.

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

Type of Structure	# Structures in Hazard Area	Value of Structures (in millions)
Residential	139	\$6.3
Commercial	6	\$0.5
Industrial	0	\$0
Agricultural	0	\$0
Religious/Non-profit	0	\$0
Government	1	\$0.1
Education	0	\$0
Utilities	0	\$0
Dams	6	Unknown
Parks	0	\$0
Total	152	\$6.9

Historical Occurrences:

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

Earthquake

For a description of this hazard, please see section 5.7.

Historical Occurrence:

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

Winter Storm

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 cause tree limbs to fall and roofs to collapse due to weight. It also creates slick roadways which can be compounded further by sleet or freezing rain events.

Historical Occurrence:

Numerous winter storm events have affected the Town of Tuxedo and remain a high risk storm event.

Searching the NCDRC Storm Events Database with the queries “Blizzard”, “Heavy Snow”, “Sleet”, “Winter Storm”, and “Winter Weather” yielded ninety-seven (97) events that impacted Orange County (1/1/1950-12/31/2015). Damages were not reported for these storm events. However, one (1) death and one (1) injury are attributed to these severe winter storm events.

Specific mention of the Town of Tuxedo was found in the following events:

- February 17-18, 2003 – Known as the Presidents Day Storm, this event resulted in Declared Emergency EM-3184, which specifically included Orange County: With an exceptionally strong high pressure system over New England, a low pressure system developed off the Mid-Atlantic Coast. Periods of light snow developed as northeast winds increased to around fifteen (15) mph across the NYC Metro area Sunday afternoon, February 16. Snow became widespread and heavy, falling at rates up to two (2) to three (3) inches per hour Sunday night and Monday, February 17. Heavy snow blown by northeast winds twenty (20) to thirty (30) mph caused near blizzard conditions throughout the area. Record heavy snowfalls crippled mass transit. These extremely hazardous weather conditions led to local emergency declarations throughout the region. In Orange County Total Snowfall ranged from fourteen (14) inches at Port Jervis to twenty-eight (28) inches at Tuxedo.

- February 25, 2010 – Orange County was hit by a winter storm which deposited record amounts of snowfall across the County. OCDES staff reported thirty-four (34) inches of snow in some parts of the County, while the National Weather Service reported thirty-two (32) inches of snow in Monroe, and twenty-nine (29) inches in both Goshen and Tuxedo. In the northeast US region as a whole, the storm was held responsible for three deaths and more than seven hundred thousand (700,000) homes and businesses were without power for significant periods, including more than twenty-one thousand (21,000) customers of Orange and Rockland Utilities. Approximately two hundred thousand (200,000) customers of Central Hudson Gas and Electric lost power over their full operating territory, including forty-eight thousand (48,000) in Orange County. The County Executive declared a state of emergency on February 26 as per the following statement:

The County has determined that road conditions are dangerous and pose a real and substantial risk to vehicular traffic and the public safety is imperiled thereby, and the presence of non-essential vehicles on the roads will impede snow removal equipment and other essential services. Accordingly, I do hereby find that the County of Orange public safety to be imperiled by the said winter storm and, consequently, to safeguard the health and welfare of the public, I declare a County state of emergency for the entire County of Orange, pursuant, inter alia, to New York State Executive Law Section 24, beginning at 6:00 p.m., February 25, 2010 and continuing until 7:00 a.m., February 26, 2010, unless extended by a subsequent Executive Order.

As a result of this declaration of a County state of emergency all non-essential vehicular traffic was prohibited from all highways and roads within the County between the hours of 6:00 p.m., February 25, 2010 and 7:00 a.m., February 26, 2010. This prohibition did not apply to vehicles engaged in snow removal, sanding, salting and clearing operations.

On March 3, The Orange County Executive issued a request to the State Governor to declare the County a disaster area, giving the following justification:

The recent storms that severely impacted Orange County and the surrounding areas left in their wake a trail of devastation that is only now being calculated. Initial estimates for Orange County in material and manpower are in excess of \$270,000. The Towns of New Windsor and Newburgh have initial estimates of over \$200,000 in clean up and labor costs; the Town of Wallkill over \$62,000.00; the City of Middletown has initial estimates of just over \$100,000.00 in overtime, sand/salt costs and damage to property. These are just preliminary examples from across the County, not to mention the ongoing recovery to local infrastructure as issues become apparent once the snow is gone.

Ice Storm

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

Historical Occurrence:

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

Wildfire

A wildfire is defined as an uncontrollable combustion of trees, brush, or grass involving a substantial land area which may have the potential for threatening human life and property. Dry conditions at various times of the year can increase the potential for wildfire events. Often, wildfires begin abruptly and spread quickly, creating a dense smoke that can fill the surrounding area for miles. Humans start four (4) out of every five (5) wildfires, typically due to debris burns, arson, or carelessness. Lightning strikes are also a leading cause of wildfires (NYSDEC, 2016).

Historical Occurrence:

One of the major contributing factors to severity of wildfires depends on the presence of humans within areas where wildfires would typically occur. The Wildland/Urban Interface (WUI) is the area where houses and wildland vegetation meet. Housing developments alter the structure and function of forests. The 2014 Annual Report for the NYSDEC Division of Forest Protection indicates that there were twenty-three (23) wildfires within Zone 3B which includes the Town of Tuxedo. These wildfires burnt a total of two hundred and thirty-nine (239) acres; none of these wildfires were over one hundred (100) acres in size. The 2013 Annual Report for the NYSDEC Division of Forest Protection indicates that there were eleven (11) wildfires in Zone 3B that year. Two of these wildfires were over one hundred (100) acres in size, a total of 672.6 acres were burnt during wildfires during the 2013 wildfire season. The 2012 Annual Report for the NYSDEC Division of Forest Protection shows that there were seven wildfires in Zone 3B that year. One of these wildfires was over one hundred (100) acres in size with a total of 507.6 acres burning during wildfires in the 2012 wildfire season.

According to the 2011 Orange County Hazard Mitigation Plan, the Town of Tuxedo wildfire risk zone is 63% due to the vast tracts of undeveloped land within the Town.

While the affected areas are usually uninhabited, these events can have long term implications on the Town's resources as well as discourage the tourism industry.

Ice Jam

For a description of this hazard, please see section 5.10.

Historical Occurrence:

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

10.2.31.4 Capability Assessment

Planning and Regulatory Capability

Table 10.2.31h: Legal and Regulatory Capabilities for Town of Tuxedo		
Regulatory Tools for Hazard Mitigation	Description	Responsible Department/Agency
Codes and/or Ordinances	<ul style="list-style-type: none"> • 2010 Residential Code of NYS • 2010 Fire Code of NYS • 2010 Building Code of NYS • 2010 Exiting Building Code of NYS • 2010 Energy Conservation Construction Code of NYS • 2010 Plumbing Code of NYS • 2010 Mechanical Code of NYS • 2010 Fuel Gas Code of NYS 	Building Department
	<ul style="list-style-type: none"> • Zoning Ordinance • Subdivision Ordinance • Floodplain Ordinance 	Planning Board
Plans, Manuals, and/or Guidelines	<ul style="list-style-type: none"> • Stormwater Management • Comprehensive Plan • Local Emergency Operations Plan (2015) 	Planning Board
Studies	<ul style="list-style-type: none"> • FIRM Flood Insurance Rate Maps, 2009 	Town Board/Building Department

Administrative and Technical

Table 10.2.31i: Summary of Administrative and Technical Staff Capabilities for Town of Tuxedo		
Staff/Resources	p	Notes
Chief Building Official	p	Town Building Inspector
Floodplain Administrator	p	Town Building Inspector
Emergency Manager	p	Town Supervisor, Town Fire Chief
Community Planner	p	Town Board, Town Planning Board, Town Consultant Planner, Town Consultant Engineer
Civil Engineer	p	Town Consultant Engineer
GIS Coordinator/HAZUS	p	Town Consultant Engineer, Town Consultant Planner
Grant Writer	p	Town Supervisor's Clerk
Maintenance Programs to Reduce Risk (tree trimming, etc.)	p	Town Highway Department, NYSDOT, Orange County DPW, Orange & Rockland Utilities, NYS OPRHP
Mutual Aid Agreements	-	N/A

Fiscal

Table 10.2.31j: Fiscal Opportunities for the Town of Tuxedo		
Financial Resources	Accessible or Eligible to Use (Yes, No, Don't Know)	Comments
Community Development Block Grants	No	-
Capital Improvements Project funding	No	-
Authority to levy taxes for specific purposes	Yes	Various projects
Fees for water, sewer, gas, or electric service	Yes	Improvements to the water and sewer districts
Impact fees for homebuyers or new developments/homes	Yes	Various projects
Incur debt through general obligation bonds	Yes	Various projects-
Federal/State Funding	Yes	Various projects

NFIP: Administrator, Vulnerability, Resources, Compliance

The Town of Tuxedo Building Inspector serves as the Floodplain Administrator. The Town began participation (policy ID 360631) on 4/12/1974. As of January 31, 2018, twenty-four (24) policies are in effect for a total value of \$6,948,700. According to Table 8.2c, there is one (1) repetitive flood loss property within the Town of Tuxedo which isn't considered a severe repetitive loss property. More NFIP data can be found in Section 8.2.

The Town is considered to be in compliance with NFIP. The Town has been maintaining NFIP participation by performing the duties and actions that were listed in the local laws that their municipal boards adopted. (Local Law #4 of 2009) The Town Floodplain Administrator has been provided an NFIP best practices guidance package and will be using it to improve local participation in NFIP standards going forward. This package of documents was provided by NYSDHSES and can be found in Appendix F - NFIP Floodplain Administrator Guidance Package.

Hazard Mitigation: Existing and Planning Mechanisms

Emergency Communications, Routes, and Shelters:

Orange County utilizes the CodeRED Emergency Communications System. The Town of Tuxedo has not designated a specific system on its website. Subscription to an RSS news feed is available on the Town's website, however. The Town follows emergency route rules set by Orange County. The Town has three (3) designated emergency shelter location: Tuxedo Park Firehouse (2 Contractors Rd., Tuxedo Park, NY 10987), Sterling Forest Firehouse (1664 Long

Meadow Rd., Tuxedo Park, NY 10987), and Eagle Valley Firehouse (14 Scott Mine Rd., Tuxedo Park, NY 10987). More information on these sites can be found in Attachment III.

Comprehensive Plan:

The Town of Tuxedo Comprehensive Plan was passed in August 2011 includes language to address hazards, identify projects for mitigation, and implement mitigation actions.

Planning Mechanisms:

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

Table 10.2.31k: Incorporation of Hazard Mitigation Planning into Existing and Future Planning Mechanisms		
Planning Mechanism	Has been Utilized	May be Utilized
Capital Improvement Budget: Hazard Mitigation Actions to be considered during the development of annual capital improvement plans. Compliance with Hazard Mitigation goals and objectives as well as the hazard vulnerability of site will be a consideration during the evaluation of infrastructure and facilities projects.		X
Operating Budget: Hazard Mitigation Actions to be considered within day-to-day operating budgets as funding permits.		X
Building & Zoning Ordinances: Review of the hazard mitigation plan and hazard analyses are part of the evaluation of land use, zoning, and development review ordinances and permitted processes.		X
Comprehensive Land Use Plan: Elements such as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.		X
Human Resource Manual: Employee job descriptions may contain elements related to hazard mitigation planning and associated recommendations.		X
Grant Applications: Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the hazard mitigation plan.		X
Fire Plan: Fire Plans for the municipality and local fire departments can utilize data and mapping in the hazard mitigation plan.		X
Local School Service Projects: Municipal officials and staff can explore the possibility of collaboration with local school districts to provide avenues for student community service projects as well as educational opportunities.		X
Economic Development: Local chambers of commerce and other economic development agencies can utilize the hazard mitigation plan to better inform new/expanding businesses in finding a location.		X

Summary

This Hazard Mitigation Plan will serve to further identify mitigation action and plans to inform the Town’s Comprehensive Plan as well as Town Codes specific to hazard events.

10.2.31.5 Mitigation Strategy and Prioritization

Past, Completed, and Ongoing Initiatives

The Town has not identified any past, completed, and ongoing initiatives.

Proposed Initiatives

Table 10.2.31I: Mitigation Actions/Projects Identified by Town of Tuxedo			
Action	Description	Involved Agency(ies)	Funding Source(s)
TX-1	Mitigate the Flooding of NYS Route 17 in the area of the addresses #500 to #600 NY-17, Drainage and Road Surface Enhancement, Flooding of the area by the Ramapo River.	NYSDOT (lead), Town Board, Town Police Department	HMG, PDM, NYS Roadway Bond, USDOT Grant, CHIPS/SHIPS Funding
TX-2	Mitigate the possibility of severe injury or loss of life due to natural hazards at the at grade pedestrian crosswalk on NYS Route 17A, in the area of # 600 NY-17A, with the construction of a Pedestrian Bridge above the State Highway.	NYSDOT (lead), Town Board, Town Police Department, NYS Parks Department, NYS Renaissance Faire	HMG, NYS Roadway Bond, USDOT Grant, CHIPS/SHIPS, NYS Senate or Assembly Member Item
TX-3	Acquisition of Severe Repetitive Loss (SRL) Single Family Residences located within the Town of Tuxedo	Town of Tuxedo Town Board (lead), Town of Tuxedo Consulting Engineer, Town of Tuxedo Building Inspector	FEMA, NYS DHSES, CDBG, NYS Senate or Assembly Member Initiative. No Town Funds would be used for these actions.
TX-4	Acquisition of Repetitive Loss Communities (RL) Residential Properties located within the Town of Tuxedo	Town of Tuxedo Town Board (lead), Town of Tuxedo Consulting Engineer, Town of Tuxedo Building Inspector	FEMA, NYS DHSES, CDBG, NYS Senate or Assembly Member Initiative. No Town Funds would be used for these actions.

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

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

Future Needs

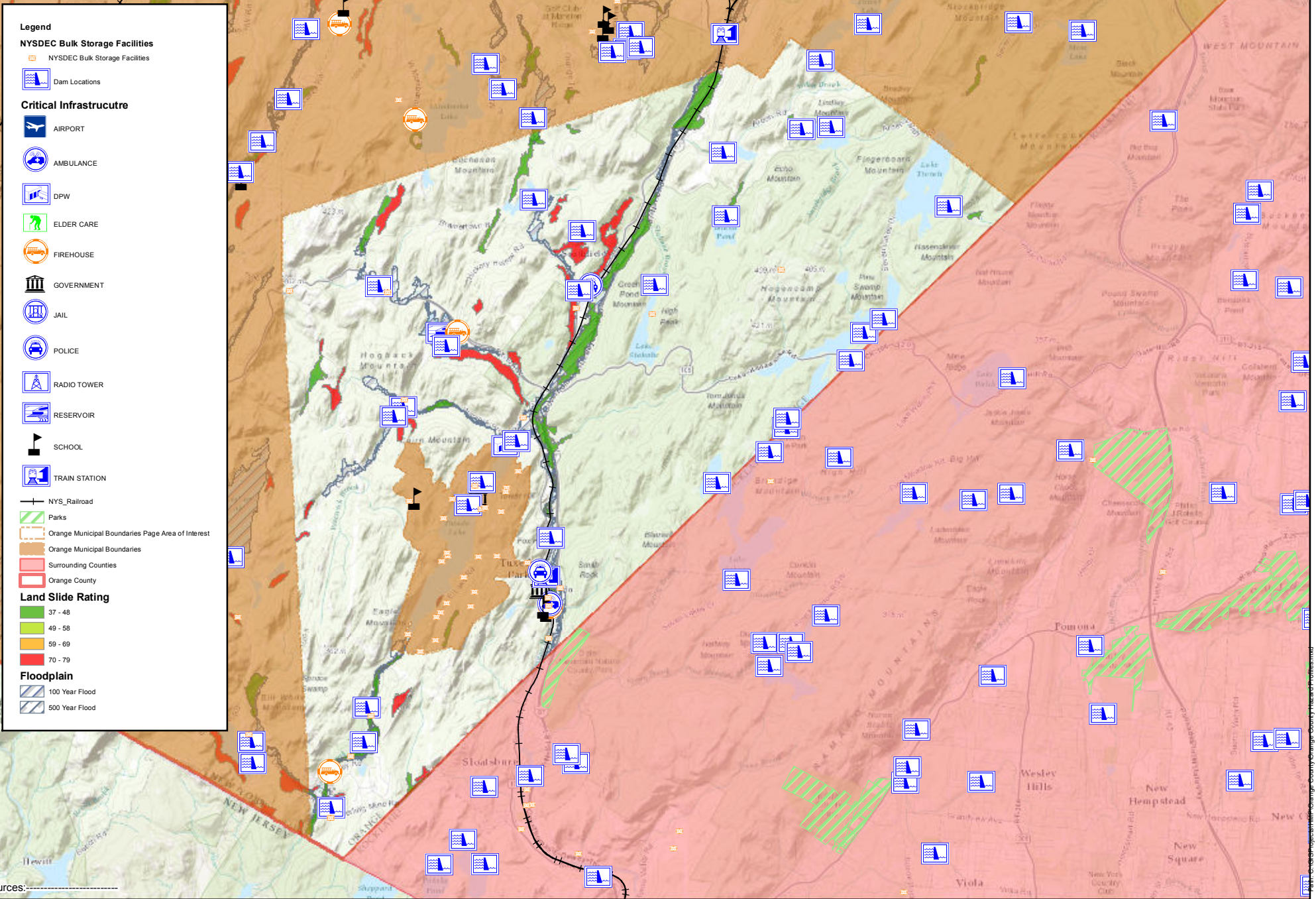
The Town has not identified any future needs.

10.2.31.6 Hazard Area Extent and Location

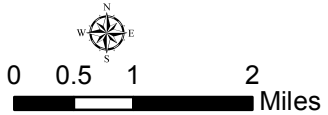
A map demonstrating the location of certain hazard areas is attached as Attachment I.

Attachment I

**Hazard Area Extent and Location Map -
Town of Tuxedo**



Sources:



Map created using ArcGIS software. Orange County Board of Supervisors. County Hazard Mitigation Plan

Attachment II

STAPLEE Mitigation Action Cost/Benefit Analysis - Town of Tuxedo

STAPLEE Criteria Consideration Tables
Mitigation Action Prioritization and Comparison

Jurisdiction: Town of Tuxedo

Action ID	Action	S	T	A	P	L	E	E	Can action be easily implemented?	Does action achieve multiple plan objectives?	Can action be quickly implemented?	Level of action benefits	Level of action overall costs	Priority ranking
		+ = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A											Levels = high, medium, or low	
TX-1	Mitigate the Flooding of NYS Route 17 in the area of # 500 to # 600 NY-17, Drainage and Road Surface Enhancement, Flooding of the area by the Ramapo River.	+	+	-	+	+	-	0	0	0	+	High	High	High
TX-2	Mitigate the possibility of severe injury or loss of life due to natural hazards at the at grade pedestrian crosswalk on NYS Route 17A, in the area of # 600 NY-17A, with the construction of a Pedestrian Bridge above the State Highway.	0	0	+	+	+	0	0	-	0	-	High	High	High
TX-3	Acquisition of Severe Repetitive Loss (SRL) Single Family Residences located within the Town of Tuxedo, these properties have been identified by the National Flood Insurance Program (NFIP).	0	+	0	0	+	0	+	0	+	0	High	Medium	High
TX-4	Acquisition of Repetitive Loss Communities (RL) Residential Properties located within the Town of Tuxedo, these properties have been identified by the National Flood Insurance Program (NFIP).	0	+	0	0	+	0	+	0	+	0	High	Medium	High

Attachment III

**Hazard Mitigation Worksheets -
Town of Tuxedo**

Mitigation Actions and Strategy Detail Worksheet

Action Worksheet	
Name of Jurisdiction	Town of Tuxedo
Name of Hazard Mitigation Plan	Orange County Multi-Jurisdictional Hazard Mitigation Plan
Potential Actions/Projects (not being implemented at this time)	
Action/Project Number	Town of Tuxedo # 1
Name of Action/Project	Mitigate the Flooding of New York State Route 17 in the area of # 500 to # 600 NY 17, Drainage and Road Surface Enhancement. Flooding of the area by the Ramapo River.
Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered	<p>Benefits of this project;</p> <p>Primary benefit of life risk reduction based on inability for emergency services to respond to residences in the area. Reduction of reoccurring cost of damages due to flooding and redirecting traffic, emergency service standby and evacuation process.</p> <p>Road reconstruction of 1000 feet of roadway. This reconstruction action plan would consist of a survey of the Identified site and determining Hydrological needs for the entire area, and developing project design, specifications and road profile plans for bid process and construction actions.</p> <p>Construction actions consisting of Culvert removal and replacement, installation of identified drainage protocols, reclaiming and elevation of</p>

	<p>roadway, institution of maintenance and protection factors.</p> <p>Estimated cost associated with this project are \$ 6,000,000.00</p>
Plan for Implementation	
Responsible Organization	New York State Department of Transportation
Action/Project Priority	Priority # 1, High Priority and High Cost
Potential Funding Sources	FEMA: HMGP and PDM Funds, New York State Roadway Bond, USDOT Grant, CHIPS or SHIPS Funding
Other assisting organizations, entities, etc.	New York State Thruway Authority, New York State Department of Environmental Conservation
Local planning mechanisms to be used in project/action implementation, if any	Town Consulting Engineer
Progress Report	
Date of status report	Unknown
Report of progress	No progress has been made
Evaluation of effectiveness	N/A

Mitigation Actions and Strategy Detail Worksheet

Action Worksheet	
Name of Jurisdiction	Town of Tuxedo
Name of Hazard Mitigation Plan	Orange County Multi-Jurisdictional Hazard Mitigation Plan
Potential Actions/Projects (not being implemented at this time)	
Action/Project Number	Town of Tuxedo # 2
Name of Action/Project	Mitigate the possibility of severe injury or loss of life due to natural hazards at the at grade pedestrian crosswalk on New York State Route 17 A, in the area of # 600 New York State Route 17 A, with the construction of a Pedestrian Bridge above the State Highway.
Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered	Benefits of this project; Primary benefit of life risk reduction based on the high volume of pedestrians and vehicle in a small area. Currently the Town Police has to man the crosswalk to allow Pedestrian to safely cross the State Highway. The construction of a 100 feet long Handicapped Accessible Pedestrian Bridge over the roadway. This construction action plan would consist of a survey of the Identified site and determining the needs for the entire area, and developing project design, specifications and road profile plans for bid process and construction actions. Construction actions consisting of site work, construction of the bridge and

	signage in the area. Estimated cost associated with this project are \$ 6,000,000.00
Plan for Implementation	
Responsible Organization	New York State Department of Transportation, New York State Parks Department
Action/Project Priority	Priority # 2, High Priority and High Cost
Potential Funding Sources	FEMA: HMGP Funds, New York State Roadway Bond, USDOT Grant, CHIPS or SHIPS Funding, New York State Senate Member Initiative or New York State Assembly Member Initiative
Other assisting organizations, entities, etc.	New York State Department of Environmental Conservation, New York State Renaissance Faire, New York State Office of Tourism
Local planning mechanisms to be used in project/action implementation, if any	Town Consulting Engineer, Town Police
Progress Report	
Date of status report	Unknown
Report of progress	No progress has been made
Evaluation of effectiveness	N/A

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

Name of Your Municipality:	<u>Town of Tuxedo</u>
Common Name of Your Emergency Shelter:	<u>1) Tuxedo Park Firehouse</u>
	<u>2) Sterling Forest Firehouse</u>
	<u>3) Eagle Valley Firehouse</u>
Street Address of Your Emergency Shelter:	<u>1) 2 Contractors Road, Tuxedo Park, NY 10987</u>
	<u>2) 1664 Long Meadow Road, Tuxedo Park, NY 10987</u>
	<u>3) 14 Scott Mine Road, Tuxedo Park, NY 10987</u>
Name of the Owner of Your Emergency Shelter:	<u>Tuxedo Joint Fire District</u>
Name of the Regular Occupant of Your Emergency Shelter:	<u>1) Tuxedo Park Fire Department</u>
	<u>2) Sterling Forest Volunteer Fire Company</u>
	<u>3) Eagle Valley Volunteer Fire Company</u>

Name of Jurisdiction: _____

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

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

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

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

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

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

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

This resolution was thereupon declared duly adopted on _____.

(Supervisor)

(Clerk)