

## 8.10 - Jurisdictional Annex, Town of Nassau

This section presents the jurisdictional annex for the Town of Nassau. The jurisdiction's governing body passed a formal resolution to participate in this multi-jurisdictional hazard mitigation plan update. A copy of their resolution is maintained at the local government offices and at the Rensselaer County Bureau of Public Safety.

### 8.10.1 Contact Information

The jurisdiction's resolution to participate identified a Primary Point of Contact and an Alternate for this hazard mitigation plan update. These individuals represented the jurisdiction on the county-wide Core Planning Group and led a local team of Jurisdictional Assessment Team Members who undertook various local activities related to the plan update.

HAZARD MITIGATION PLAN POINTS OF CONTACT						
Primary Point of Contact				Alternate Point of Contact		
Name: David Fleming Title: Supervisor Address: 29 Church Street, Nassau, NY 12123 Phone Number: 518-766-3559 E-mail Address: <a href="mailto:supervisor@townofnassau.org">supervisor@townofnassau.org</a>				Name: Fred McCagg Title: Highway Superintendent Address: 29 Church Street, Nassau, NY 12123 Phone Number: 518-766-3559 E-mail Address: <a href="mailto:nassauhighway@fairpoint.net">nassauhighway@fairpoint.net</a>		
Jurisdictional Assessment Team Members						
Local Jurisdiction Role/Position	Name	Email	Phone	Date of Invitation	Method of Invitation	Agreed to participate?
Land Use/Community Planner	none					
Emergency Manager	David Fleming	<a href="mailto:supervisor@townofnassau.org">supervisor@townofnassau.org</a>	518-766-3559	Fall 2018	Email	Yes
Floodplain Manager/Administrator	Mike Prest	<a href="mailto:ceo@townofnassau.org">ceo@townofnassau.org</a>	518-766-3559	Fall 2018	Email	Yes
Public Works Director / City Engineer	Fred McCagg	<a href="mailto:nassauhighway@fairpoint.net">nassauhighway@fairpoint.net</a>	518-766-3559	Fall 2018	Email	Yes
Building Code Official	Mike Prest					
Fiscal/Budget Officer	David Fleming					
Manager/Administrator	David Fleming					
Elected Officials	none					
Local Hospital	N/A					
Major University	N/A					
Significant Business	N/A					
Neighboring County 1	Town of Chatham/Columbia County	<a href="mailto:Highway@chathamnewyork.us">Highway@chathamnewyork.us</a>	518-794-7281	3/7/2019	Phone call	Yes
Neighboring County 2	N/A					
Neighboring County 3	N/A					
Neighboring County 4	N/A					
Tribal Group/Nation	N/A					

### 8.10.2 JURISDICTION PROFILE

#### 8.10.2.1 Location and Land Area

The Town of Nassau is located in south central Rensselaer County, in the eastern part of New York State. It shares a border with Sand Lake to the north; Columbia County to the south; Stephentown to the east; and Schodack to the west.

According to the 2010 U.S. Census Bureau, Rensselaer County has a total area of 665 square miles (1,720 km<sup>2</sup>), of which 652 square miles (1,690 km<sup>2</sup>) is land and 13 square miles (34 km<sup>2</sup>) (1.9%) is water. Of that, the Town of Nassau has a total area of 45.24 square miles (117.16 km<sup>2</sup>), of which 44.44 square miles (115.11 km<sup>2</sup>) is land and 0.79 square miles (2.05 km<sup>2</sup>) is water.

### 8.10.2.2 Population

According to the 2010 U.S. Census Bureau's American Community Survey 5-Year Estimates, the population of Town of Nassau is estimated to be 4,789 persons.

### 8.10.2.3 Demographics

Of a total area of 45.21 square miles (2010 Census data), the land area is 44.54 square miles and the population per square mile is 108.2 persons.

Of the total population, there are 102.0 males per 100 females (all ages). Approximately 21% of the population is comprised of persons under 18 years, and 12.4% are persons 65 years and over (2010 Census). Young and old subsets of the population may have unique needs as far as care requirements and potential cognitive and/or mobility limitations before, during, and after a disaster.

The number of persons who speak a language other than English is 63, or 1.4%, of which 0.0% speak English less than "very well". Persons not speaking English well may have trouble understanding instructions regarding disaster preparation, response, and recovery.

Regarding education, of persons age 25 years and older, 84.9% are high school graduates or higher, and 22.0% have received their bachelor's degree or higher (2000 Census data). Higher education can help enhance skills associated with cognition and evaluation of risk. Higher education can, therefore, foster an overall improved perception of risk, particularly where individuals may not have prior direct experience preparing for, responding to, or recovering from a particular hazard in their daily lives.

Regarding families and living arrangements, from 2013 to 2017 there were 789 total households and 2.38 persons per household. Persons living alone sometimes have less of a direct social circle for support before, during, and after a disaster.

The Census Bureau classifies all people not living in housing units (house, apartment, mobile home, rented rooms) as living in group quarters. The two types of group quarters are Institutional (correctional facilities, nursing homes, mental hospitals) and Non-Institutional (college dormitories, military barracks, group homes, missions, shelters). The Census Bureau maintains no group quarters information for this municipality. The needs of persons living in group quarters are unique, and residents are likely to have access and functional needs and unique care requirements before, during, and after a disaster.

According to 2017 ACS, the median household income was \$73,208; the per capita income in past 12 months (2017) was \$34,005; and the percentage of persons in poverty was 6.2%. Lower income persons have limited financial resources to draw from in both a pre- and post-disaster scenario and are likely to require support as they prepare for, and recover from, hazard events.

The total of noninstitutionalized civilians with a disability is 7.1%, and percentage of people with a disability over age 65 years is 41.6%. The total percentage of persons (civilian, noninstitutionalized) without health insurance is 2.3%. Persons with disabilities have access and functional needs such as cognitive or mobility limitations that may put them at greater risk before, during, and after a hazard event.

#### 8.10.2.4 Brief History

The area that is now Rensselaer County was inhabited by the Algonquian-speaking Mohican Indian tribe at the time of European encounter. Kiliaen van Rensselaer, a Dutch jeweler and merchant, purchased the area in 1630, as part of the Dutch colony New Netherland. The land passed from English rule (1664) to Dutch control (1673), then back to English rule (1674), until American independence in 1776. Rensselaer County was created in 1790s from an area that was originally part of the very large Albany County. In 1807 the county reorganized.

The region was first settled around 1760. The town was originally formed as the Town of Philipstown in 1806 from parts of the Towns of Petersburg, Schodack, and Stephentown. The town changed its name to "Nassau" in 1808.

#### 8.10.2.5 Governing Body Format

The governing body of the municipality consists of various town officials. This council serves as the municipal/local government, performing executive functions of different natures. Members of this governing body are elected by the people.

#### 8.10.2.6 Growth/Development Trends

Performing an assessment of growth and development trends is one step of a hazard mitigation plan update. This look into the future is important because development in hazard areas could put more people and property in harm's way and, in turn, could work to increase potential disaster-related damages and losses at a time when the mitigation plan's purpose is to reduce the potential for damages emanating from natural disasters.

An evaluation of growth and development trends was undertaken by each participating jurisdiction as part of the development of the initial plan in 2011. As part of this plan update, the Town of Nassau reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019.

The Town of Nassau did not note any major residential or commercial development taking place, or any major infrastructure development planned for the next 5 years in the municipality. Single family residential development is occurring in predominantly undeveloped forest and former agricultural lands throughout this rural municipality. Density of development is low. While the minimum lot size is two acres in the Rural Residential District, which represents the majority of the Town, most recent development has been on lots somewhat larger than this size. Development has occurred on generally easily-developed lands near existing roadways with ready access to existing infrastructure. There is some pressure to develop residential sites more distant from road frontages.

New Development/Potential Development in the Municipality						
Property Name	Type (Residential or Commercial)	No. of Structures	Address	Block and Lot	Known Hazard Zone	Description /Status
Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported

The Town enforces regulations, ordinances and codes to minimize effects of natural hazards on new development. The Town of Nassau enforces its local zoning law of 2011 (<https://townnassau.digitaltowpath.org:10091/content/Laws/View/15>). Development in flood hazard areas is enforced through the local flood law and the Town’s participation in the NFIP. The Town of Nassau also has a steep slope ordinance to limit development on areas of 15% or greater slopes is under review for proposed incorporation to revised zoning code. The current state building codes are enforced in new development or for major modifications of existing developments. The Town notes that there is limited seismic hazard.

### 8.10.3 HAZARD IDENTIFICATION

The following hazards represent those that were deemed to be significant hazards of concern for the Town of Nassau:

Profiled Hazards in the Town of Nassau													
Jurisdiction	Atmospheric Hazards						Hydrologic Hazards			Geologic Hazards		Other Hazards	
	Extreme Temperatures (Coldwave/Heat Wave)	Hurricane / Tropical Storm	Lightning	Tornado	Wind	Winter Storm	Drought	Flood			Earthquake	Landslide <sup>4</sup>	Wildfire <sup>5</sup>
								Flooding <sup>2</sup>	Dam Failure <sup>1</sup>	Ice Jam <sup>3</sup>			
Nassau, Town of	■	■	■	■	■	■	■	■		■		■	

Notes: (1) Based on presence of a High hazard dam (NYSDEC classification) either in the municipality or close upstream on a watercourse flowing through that municipality and feedback from the County Planning Department. (2) Based on identification of improved property in mapped FEMA flood hazard zones. (3) Based on historical records, Flood Insurance Studies, and local information as well as feedback from the County Planning Department. (4) Based on identification of improved property in mapped high incidence or high susceptibility landslide risk zones, plus those municipalities in which details of individual landslide events are available. (5) Based on identification of improved property in mapped wildfire hazard zones.

### 8.10.4 NOTABLE HAZARD EVENT OCCURRENCES SINCE 2011

Rensselaer County has a long history of natural hazard events occurring, as detailed in Section 3 of this plan. A summary of historical events is provided in each of the hazard profiles of Section 3 and includes a chronology of events that have affected the County and its municipalities.

NOAA's NCEM records 1,141 hazard event occurrences from 1950 to 2018 causing 1 fatality, 116 injuries, \$27,679,000 in property damage, and \$305,800 in crop damage. The table below presents a summary of 415 events that are included in NOAA's NCEM records for Rensselaer County since the prior 2011 HMP was prepared to summarize the recent range and impact of natural hazard events potentially affecting the County and its municipalities. For details of events prior to 2011, refer to Section 3 of this plan.

Natural Hazard Event History (January 2011 through December 2018)					
Event Type	Count	Fatalities	Injuries	Property Damage	Crop Damage
Blizzard	2	0	0	\$0	\$0
Cold/Wind Chill	28	0	0	\$0	\$0
Excessive Heat	3	0	0	\$0	\$0
Extreme Cold/Wind Chill	8	0	0	\$0	\$0
Flash Flood	20	0	0	\$320,000	\$0
Flood	16	0	0	\$10,000	\$0
Frost/Freeze	6	0	0	\$0	\$0
Hail	29	0	0	\$0	\$0
Heat	17	0	0	\$0	\$0
Heavy Rain	1	0	0	\$0	\$0
Heavy Snow	13	0	0	\$0	\$0
High Wind	17	0	0	\$0	\$0
Lightning	1	0	0	\$50,000	\$0
Storm Surge/Tide	1	0	0	\$0	\$0
Strong Wind	22	0	0	\$48,000	\$4,000
Thunderstorm Wind	141	0	7	\$0	\$0
Tropical Storm	2	0	0	\$0	\$0
Winter Storm	28	0	0	\$0	\$0
Winter Weather	60	0	0	\$0	\$0
Total	415	0	7	\$428,000	\$4,000

Since 1954, Rensselaer County has been designated as eligible for at least one form of FEMA assistance in 16 Federally-declared major disasters and eight Federally-declared emergencies. Since the adoption of the 2011 HMP, Rensselaer County has been designated as eligible for at least one form of FEMA assistance in three of the state's 12 Federally-declared major disasters (2011 through 2018).

Rensselaer County Disaster Declarations, 2011-2018					
Declaration Year	Event Incident Period	Declaration Type	Disaster Type	Disaster Number	Rensselaer County Designation
2017	March 14-15, 2017	Major Disaster Declaration	Severe Winter Storm and Snowstorm	DR-4322	Declared for PA only
2011	September 7-11, 2011	Emergency Declaration	Tropical Storm Lee	EM-3341	Declared for PA Category B

Rensselaer County Disaster Declarations, 2011-2018					
Declaration Year	Event Incident Period	Declaration Type	Disaster Type	Disaster Number	Rensselaer County Designation
2011	August 26, 2011 through September 5, 2011	Major Disaster Declaration	Hurricane Irene	DR-4020	Declared for PA and IA
2011	December 26-27, 2010	Major Disaster Declaration	Severe Winter Storm and Snowstorm	DR-1957	Declared for PA Category B

Source: FEMA, online at <https://www.fema.gov/disasters>, queried on July 11, 2019  
PA= FEMA's Public Assistance Program  
IA= FEMA's Individual Assistance Program  
Category B= FEMA's Public Assistance Program Category B (Emergency Protective Measures)

Some more recent notable events in the Town of Nassau since 2011 include:

August 28, 2011 - Irene

The remnants of Hurricane Irene brought heavy to extreme rainfall throughout Rensselaer County. Portions of Route 20 were reported closed due to flooding between Lords Hill Road and Coldwater Tavern Road in Nassau.

October 29-30, 2012 – Sandy

Rainfall in Rensselaer County was not excessively heavy and did not cause notable flooding, thanks to dry antecedent conditions. Wind gusts of 40 to 60 mph were common from the afternoon of the 29th until the early morning hours of the 30th.

September 8, 2012 – Thunderstorm Winds

Multiple trees and wires were reported down due to thunderstorm winds in Nassau.

June 19, 2017 – Thunderstorm Winds

Trees were reported down along Route 20 in Nassau due to thunderstorm winds.

June 30, 2017 to July 1, 2017 - Severe Storms and Flooding

Numerous strong to severe thunderstorms occurred across Rensselaer County. Thunderstorm winds caused damages throughout the county, downing trees and power lines, and heavy rains caused flooding in many areas of the county. In the Town of Nassau Route 20 was closed between Bliss School House Road and Route 66 due to downed trees and wires as a result of thunderstorm winds.

### 8.10.5 NATIONAL FLOOD INSURANCE PROGRAM SUMMARY

The Town of Nassau has participated in FEMA's National Flood Insurance program (NFIP) since September 5, 1984.

Total number of policies <sup>1</sup> :	29
Insurance in force <sup>2</sup> :	\$6,188,300

<sup>1</sup> Policies in Force from [www.fema.gov](http://www.fema.gov) on 02/21/19, data current as of 09/30/18.

Total number of losses: 97  
 Total claims paid: \$3,000,835  
 Repetitive Loss Properties: 0  
 Severe Repetitive Loss Properties: 0

The Town of Nassau provided the following NFIP Administrator Input in 2019, for inclusion in the 2019 HMP.

Name: Michael Prest		Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator					
Community: Town of Nassau		Email and Phone: ceo@townofnassau.org					
<b>Worksheet 2 - NFIP</b>							
<p><i>Note: This form should be filled out by your floodplain administrator. Submittals should be returned via email to Jay Wilson at jwilson@renesco.com. Feel free to contact Anna Foley of AECOM if you have questions, at <a href="mailto:anna.foley@aecom.com">anna.foley@aecom.com</a>. All communities participating in the National Flood Insurance Program (NFIP) provided FEMA with a floodplain management ordinance and a designated floodplain administrator as a prerequisite to enter the program. All participating communities must provide the information below. Please return a copy of your floodplain management ordinance to us with this submittal.</i></p>							
Adoption Date of your Current Floodplain Management Ordinance	Date of Entry into NFIP <sup>1</sup>	Position or Title of Your Jurisdiction's Designated Floodplain Manager/Administrator (may also be called NFIP Coordinator)	Is this person a Certified Floodplain Manager?	Is floodplain management an auxiliary function?	Is your community in good standing with the NFIP?		
1987	9/5/1984	Building Inspector//Code Enforcement Officer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Provide an explanation of NFIP administration services (i.e., permit review, GIS, education or outreach, inspections, engineering capability, etc.):							
As per towns 1987 Flood Damage Prevention Law town regulates uses which are dangerous to health, safety and property due to water or erosion hazards. Requires uses that are vulnerable to floods be protected against flood damage. Control alteration of natural floodplains. Control filling, grading, dredging and other development which increases flood or erosion damages. Qualify and maintain for participation in NFIP. Permit system in place for oversight of construction and building with site plan review and oversight by Town Code and Planning board. Windshield inspections are occurring on a ongoing basis. As well as pictometry review.							
Describe barriers to running an effective NFIP program in the community (if applicable):							
Positions within town are part time with limited resources.							
When was most recent FEMA Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?*	Is a CAV or CAC scheduled or needed?	Does the current floodplain management ordinance exceed FEMA or State minimum requirements? If so, describe how.	Is training of staff regarding NFIP issues planned?	Does your community intend to continue to enforce the floodplain management requirements including regulating new construction in Special Flood Hazard Areas (SFHAs)?	Does your community participate in the CRS? If so, state your Class.	Does your community intend to continue its participation in the CRS program?	If your community is not currently participating in the CRS program, are you intending to initiate the process during the next planning cycle?
Not in past 8 years	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No* * Class ____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Describe any outstanding compliance issues (i.e., current violations):							
None at this time							
<p><sup>1</sup> Your date of entry into the NFIP can be found at: <a href="http://www.fema.gov/cis/NY.html">http://www.fema.gov/cis/NY.html</a> (column "Reg-Emer Date").</p> <p>Rensselaer County Multi-Jurisdictional Hazard Mitigation Plan Update – NFIP Worksheet <span style="float: right;">NFIP-1</span></p>							

<sup>2</sup> Insurance in Force from [www.fema.gov](http://www.fema.gov) on 02/21/19, data current as of 09/30/18.

Name: Michael Prest		Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator						
Representing: Town of Nassau		Email and Phone: ceo@townofnassau.org						
Provide an explanation of your local floodplain permitting process:								
Building permits and other required documents per our 2011 Zoning Law. These documents are reviewed on an individual basis for compliance.								
Does your community intend to continue floodplain identification and mapping services including any local requests for map updates?	Does your community intend to initiate/continue the buyouts of repetitive loss properties?	Does your community intend to commit staff or resources to improve local mapping or code administration in the future?	Does your community intend to provide local outreach to promote the sale of flood insurance?	Does your community intend to participate in RiskMAP meetings and planning initiatives?	Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to continue to implement home improvement programs designed to minimize basement flooding?	Does your community intend to continue to implement roadway improvements to reduce damage from future flooding events?	Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority?
[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	[X] Yes [ ] No	N/A
Does your community intend to adopt the new FEMA Advisory Base Flood Elevations?	As Floodplain Manager, did you (or your predecessor at the time) actively participate in the development of the initial Hazard Mitigation Plan?		As Floodplain Manager, are you actively participating in the development of this Hazard Mitigation Plan Update?		Have there been any changes to your community's local floodplain management program since the last version of the plan in 2011?			
[X] Yes [ ] No	[X] Yes [ ] No		[X] Yes [ ] No		[ ] Yes * [X] No			
* If you answered "yes", that there have been changes to your local program since 2011, please describe:								
Provide a description of your community assistance and monitoring activities:								
Town planning board reviews projects that may involve floodplain issues. 2011 Zoning Law dictates how planning board reviews site plans for compliance. Flood Manager does regular windshield inspections throughout town and Floodplain areas.								
NFIP participating communities are required to update/revise their floodplain management ordinance to ensure that it complies with the latest FEMA regulations. Will your community continue to commit to this program requirement?				NFIP participating communities are also required to update/revise their floodplain management ordinance to be consistent with the latest FIRMs. Will your community continue to commit to this program requirement?				
[X] Yes [ ] No				[X] Yes [ ] No				
<p>Note: NFIP policy statistics by community are maintained at: <a href="http://bsa.nfipstat.fema.gov/reports/1011.htm#NJ">http://bsa.nfipstat.fema.gov/reports/1011.htm#NJ</a>          NFIP claims data by community is maintained at: <a href="http://bsa.nfipstat.fema.gov/reports/1040.htm#34">http://bsa.nfipstat.fema.gov/reports/1040.htm#34</a>          Information about structures at risk of flooding can be found in the current Hazard Mitigation Plan.          All NFIP participating communities should encourage local residents to purchase and maintain flood insurance.</p>								
Rensselaer County Multi-Jurisdictional Hazard Mitigation Plan Update – NFIP Worksheet						NFIP-2		

### 8.10.6 ASSET IDENTIFICATION AND CHARACTERIZATION

An inventory of geo-referenced assets in Rensselaer County has been created in order to identify and characterize property and persons potentially exposed to the identified hazards. Section 3b of the plan presents the asset identification and characterization process in great detail. The following table presents an overview of assets in Rensselaer County<sup>3</sup> and the subset of those assets that fall within the Town of Nassau.

<sup>3</sup> The County totals are included here for readers to understand the proportion of countywide assets that lie within this municipality.

Asset Inventory																			
Jurisdiction	Improved Property (RCV <sup>4</sup> )	Emergency Facilities					Critical Infrastructure and Utilities										Other Key Facilities		Historic and Cultural Resources
		Fire Stations	Police Stations	EMS / Ambulance Stations	Hospitals	Shelters <sup>5</sup>	Wastewater Facilities	Water Treatment Facilities	Airports	Railroads (Passenger/ Freight Station)	Electric Power Facilities	Communications Facilities	Oil Facilities	Hazardous Materials Sites	Natural Gas Facilities	Ports	Schools	Residential Senior Care Facilities <sup>6</sup>	
Rensselaer County	\$33,333,947,000	44	9	19	2	33	8	1	0	13	1	6	5	60	1	12	64	3	84
Town of Nassau	\$571,880,000	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Rensselaer County	Population, Census 2010:	159,429																	
Town of Nassau	Population, Census 2010:	4,789																	
Rensselaer County	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	30,429																	
Town of Nassau	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	828																	

<sup>4</sup> Replacement Cost Value

<sup>5</sup> Specific shelter data is protected information and is not released to the public unless and until necessary during a disaster.

<sup>6</sup> \* As per the County Department of Economic Development and Planning, these figures only encompass the senior centers which are not residential facilities.

Exposure – Assets in the Floodplain

Land. Approximately four percent of land in the Town of Nassau is located in the 100-year floodplain.

Land in the 100-year Floodplain			
Municipality	Land Area of Municipality (Acres)	Land in the 100-year Floodplain (Acres)	Percent of Land in the 100-Year Floodplain (%)
Nassau, Town of	25,558	1,066	4%

Improved Property. Approximately three percent of the Town of Nassau's improved property is located in the 100-year floodplain.

Improved Property in the 100-year Floodplain			
Municipality	Replacement Cost Value (RCV) Structure and Contents (\$)	RCV in the 100-year Floodplain (\$)	Percent of RCV in the 100-Year Floodplain (%)
Nassau, Town of	\$571,880,000	\$17,671,547	3%

Population. Approximately one percent of the population of the Town of Nassau is located in the 100-year floodplain.

Population in the 100-Year Floodplain			
Municipality	Total Population (Census 2010)	Estimated Population in the 100 year Floodplain	Percent of Population in the 100 year Floodplain
Nassau, Town of	4,789	55	1%

Critical Facilities. One critical facility (emergency facilities, critical infrastructure and utilities, and other key facilities, as presented in Section 3b) in the Town of Nassau is located in the floodplain.

Critical Facilities in the Floodplain			
Municipality	Type of Facility	Name of Facility	Flood Zone <sup>7</sup>
Nassau, Town of	HAZMAT FACILITY	QUEST INTL.	A/AE/AO

Historic and Cultural Resources. No listed historic or cultural resources are located in the floodplain in the Town of Nassau.

<sup>7</sup> 100-year floodplain = A/AE/AO; 500-year floodplain = X500

### 8.10.7 POTENTIAL FUTURE DAMAGES

Estimated annual losses provided in this section are based on best available data, and the methodologies applied result in an approximation of risk. Loss estimates should be used to understand relative risk from hazards.

Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (i.e., incomplete inventories, demographics or economic parameters

The following table provides estimated average annual losses from HAZUS-MH 4.0 runs, where available. For hazards for which HAZUS modules are not available, historic damages have been distributed across municipalities based on their proportion of improved property. It is important to note that this table reflects estimates of average annual damages. For any hazard, individual event damages could be substantially (orders of magnitude) higher.

For the Town of Nassau, the hazard with the highest estimated average annual losses is flooding.

Summary of Annual Loss Estimates – Town of Nassau <sup>8</sup>													
Municipality	Replacement Cost Value of Improvements (\$)	Extreme Temperatures	Hurricane/ Tropical Storm - Wind	Hurricane/ Tropical Storm – Wind + Flood	Lightning	Tornado	Wind	Winter Storm (Ice Storm/ Snow Storm)	Drought	Flood	Earthquake	Landslide	Wildfire
		NOAA NCEI, 1996-2018	HAZUS	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	NOAA NCEI, 1996-2018	HAZUS	HAZUS	NOAA NCEI, 1996-2018
Nassau, Town of	\$571,880,000	\$24	\$317	\$1,482	\$184	\$8,130	\$2,059	\$577	\$0	\$21,410	\$1,375	\$0	\$2

<sup>8</sup> \* **It is important to note that this table reflects estimates of average annualized damages. For any hazard, individual event damages could be substantially higher.**

### 8.10.8 HAZARD RANKINGS AND KEY RISK FINDINGS

Hazard rankings for the Town of Nassau are provided in the table below. Hazard priorities are based on each hazard's likelihood of occurrence, potential consequences, relative risk and average annualized losses. Rows are shaded red for High Hazard Priority; yellow for Moderate Hazard Priority; and green for Low Hazard Priority.

Flooding is the Town of Nassau's highest priority hazard.

Hazard Rankings – Town of Nassau					
Hazard	Future Probability	Potential Consequence	Relative Risk	Hazard Priority	Average Annualized Losses <sup>9</sup>
Extreme Temperatures (Coldwave/ Heat Wave)	Low	Low	Low	Low	\$24
Hurricane/ Tropical Storm	Low	High	Moderate	Moderate	\$317 Wind; \$1,482 Wind + Flood
Lightning	High	Low	Low	Low	\$184
Tornado	Low	High	High	High	\$8,130
Wind	High	Low	High	High	\$2,059
Winter Storm (Ice Storm/Snow Storm)	High	Moderate	Moderate	Moderate	\$577
Drought	Low	High	Low	Low	\$0
Flood	High	High	High	High	\$21,410
Earthquake	Low	High	Moderate	Moderate	\$1,375
Landslide	Low	Low	Low	Low	\$0
Wildfire	Low	Low	Low	Low	\$2

Key risk findings identified by the Town of Nassau JAT as representing the highest local priorities for mitigation are:

- The Kronuner Road large culvert/bridge is structurally and functionally obsolete and under capacity. Insufficient hydraulic flow causes flooding and road closures. Continued patchwork repairs are not deemed to be a responsible use of limited funding.
- Across the Town, there are other culverts/bridges (in addition to the Kronuner Road location mentioned above) that are also under capacity and contributing to flooding. Noted problem areas include, but would not be limited to: Old Mill Pond Road, Kronuner Road, Clarkes Chapel Road, Mashodack Road, Fredenburg Road, Alps Mountain Road, McGill Road, and Dusenberry Road.

Mitigation projects to address these key risks are included as part of the Town's overall hazard mitigation strategy.

<sup>9</sup> Source: NOAA NCEI, except as noted. \$0 in average annualized losses had no damages recorded for events between 1996 and 2018. Actual annual damages are unquantifiable but higher.

### 8.10.9 OUTREACH TO THE PUBLIC AND OTHER STAKEHOLDERS

As part of this 2019 Plan Update, the Town of Nassau undertook various activities to: (a) alert the public and other stakeholders to the fact that the HMP Planning Committee was working to develop the update; and (b) provide the public and other stakeholders with a forum to ask questions and submit comments and suggestions on the process. Outreach activities undertaken by the Town included:

Outreach Activities			
DATE OF ACTIVITY	TYPE OF ACTIVITY	ACTIVITY DETAILS	LEAD DEPARTMENT AND/OR STAFF TITLE WHO UNDERTOOK ACTIVITY
December 2018	Oral discussion with Town board	Had discussions with town board and public at monthly town board meeting and gave updates and plan of action on RCMJHM project	Fred McCagg
January 2019	Town board	Informed town board of updates and requested to publish links on town website for plan	Fred McCagg Town Webmaster
January 2019	Town Website public notice posting	Town website posted public notice of Town's participation in RC Multi-Jurisdictional Hazard Mitigation Planning Project	Fred McCagg David Fleming - Town Supervisor Diane Macguire - Supervisor Secretary Mitch Levin - Town website webmaster
February 2019	Notice to other highway departments	At monthly Rensselaer County Association of Town Superintendents of Highway meeting notified other county highway superintendents of plan update requirements	Fred McCagg
March 2019	Cross county lines outreach	Contacted Town of Chatham Highway and discussed and agreed on shared service in case of extreme weather events. Also been in contact with Tracey Testo Cornell Cooperative Extension of Columbia and Greene Counties Agroforestry Resource Center in regard to culverts and stream flow issues during extreme weather event	Fred McCagg Joe Rickert Town of Chatham Tracey Testo Cornell Cooperative Extension

The Town of Nassau received no comments a result of its outreach activities:

### 8.10.10 CAPABILITY ASSESSMENT

This section describes the following capabilities of the local jurisdiction:

- Legal and regulatory capability;
- Administrative and technical capability;
- Fiscal capability;
- Community resiliency;
- Community political capability; and
- Community classification.

### 8.10.10.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Nassau. The Town reviewed its responses from the 2011 HMP and has updated its prior feedback to reflect present-day conditions.

Legal and Regulatory Capability			
Regulatory Tools (Codes, Ordinances, Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of Adoption)
a. Building code	Y	Building/Code Enforcer	Zoning Law 2011 & Comprehensive Plan 2008
b. Zoning ordinance	Y	Building/Code Enforcer Zoning Board	Zoning Law 2011 & Comprehensive Plan 2008
c. Subdivision ordinance or regulations	Y	Building/Code Enforcer Planning Board	Zoning Law 2011 & Comprehensive Plan 2008
d. Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Formal and State laws may be stricter in some instances	Zoning Law 2011 & Comprehensive Plan 2008
e. Growth management ordinances (also called "smart growth" or anti-sprawl programs)	Y	Lot design – PDD laws enacted	Zoning Law 2011 & Comprehensive Plan 2008
f. Site plan review requirements	Y	Building/Code Enforcer Planning Board	Zoning Law 2011 & Comprehensive Plan 2008
g. General, comprehensive or master plan	Y	New plan under review	Comprehensive Plan 2008
h. A capital improvements plan	N	Priority capital replacement list created	
i. An economic development plan	N	Comprehensive plan in development	Zoning Law 2011 & Comprehensive Plan 2008
j. An emergency response plan	Y	State supersedes only on large scale	
k. A post-disaster recovery plan	N	Emergency plan outlines town actions	
l. A post-disaster recovery ordinance	N	Emergency plan addresses above	
m. Real estate disclosure requirements	N		
n. Other			

### 8.10.10.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Nassau. The Town reviewed its responses from the 2011 HMP and has updated its prior feedback to reflect present-day conditions.

Administrative and Technical Capability		
Staff / Personnel Resources	Available (Y or N)	Department / Agency / Position
a. Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Building Department, Planning Board Chair
b. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Building inspector
c. Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N	
d. Floodplain manager	Y*	Building Inspector/Code
e. Surveyors	N	
f. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Building inspector, emergency services, Hwy Supervisor
g. Personnel skilled in GIS and/or HAZUS	N	
h. Scientists familiar with the hazards of the community	N	
i. Emergency manager	Y	Town Supervisor
j. Grant writers	Y	Contract as needed
k. Staff with expertise or training in benefit/cost analysis	N	
*All communities participate in the National Flood Insurance Program; as such, they are required by the regulations to have an appointed floodplain manager.		

### 8.10.10.3 Fiscal Capability

The table below summarizes financial resources available to the Town of Nassau. The Town reviewed its responses from the 2011 HMP and has updated its prior feedback to reflect present-day conditions.

Fiscal Capability	
Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
a. Community Development Block Grants (CDBG)	Yes
b. Capital improvements project funding	Yes
c. Authority to levy taxes for specific purposes	Yes
d. Fees for water, sewer, gas, or electric service	Yes
e. Impact fees for homebuyers or developers for new developments/homes	Yes
f. Incur debt through general obligation bonds	Yes
g. Incur debt through special tax and revenue bonds	Yes
h. Incur debt through private activity bonds	No
i. Withhold spending in hazard-prone areas	No
j. State mitigation grant programs	Yes
k. Community Development Block Grants (CDBG)	Don't know
j. Other	Hudson River Estuary Grants

### 8.10.10.4 Overall Capabilities

The Town of Nassau's 2019 assessment of its overall capabilities to implement hazard mitigation strategies in each of the above categories, in addition to their local assessment of how these capabilities could be expanded and/or improved to reduce risk, is presented in the table below.

Overall Capabilities				
Overall legal and regulatory capability to implement hazard mitigation strategies	Overall technical capability to implement hazard mitigation strategies	Overall fiscal capability to implement hazard mitigation strategies	Overall administrative capability to implement hazard mitigation strategies	Community's willingness to enact policies and programs that reduce hazard vulnerabilities
Low	Low	Low	Low	Moderate
How these capabilities can be expanded and/or improved to reduce risk:				
Community outreach. Staff training. Public forums. Inter cooperation with State, County and Town municipalities. Improve staff resources.				

### 8.10.10.5 Community Classifications

The table below summarizes classifications for community program available to the Town of Nassau.

Community Classifications		
Program	Classification	Date Classified
Community Rating System (CRS) *	NP	
Building Code Effectiveness Grading Schedule (BCEGS)	NP	
Public Protection	NP	
Storm Ready	NP	
FireWise	NP	

Notes:

- = Unavailable

N/A = Not applicable

NP = Not participating

\* CRS Ranking as of April 2019

The classifications listed above relate to the Town of Nassau's ability to provide effective services to lessen its vulnerability to the natural hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS Class applies to flood insurance, while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with Class 1 being the best possible classification, and Class 10 representing no classification benefit.

FireWise classifications include a higher classification when the subject property is located beyond 1,000 feet of a creditable fire hydrant and is within five road miles of a recognized fire station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National FireWise Communities website at <http://firewise.org/>

### 8.10.11 PLAN FOR DISPLACED RESIDENTS

New York State requires that intermediate and long-term housing options must be available for relocating displaced residents to maintain post-disaster social and economic stability. Intermediate and long-term housing options for displaced residents was evaluated as part of the 2019 HMP Update. Additional information can be found in Appendix C.

### 8.10.12 PLAN FOR EVACUATION NEEDS AND SHELTERING

The Town of Nassau has an emergency response plan<sup>10</sup>. It does not have a post-disaster recovery plan or a post-disaster recovery ordinance<sup>11</sup>. Rensselaer County has an existing Comprehensive Emergency Management Plan (CEMP) documenting the County's plan for evacuation and sheltering measures during hazard events. The Plan is posted online at: <http://www.rensco.com/wp-content/uploads/2019/07/Rensselaer-County-CEMP.pdf>. As part of this hazard mitigation plan update, the Rensselaer County reviewed their existing CEMP and determined that updates were necessary at this time. Updates to the CEMP are being completed at this time. Once finalized and approved, the County will post the updated CEMP at the same address and will follow procedures in its updated CEMP in all future disasters. The County BPS indicated that there are no designated evacuation routes.

Appendix B contains updated shelter data provided by the Red Cross in 2018. Shelter locations are not made public until facilities are actually opened for an event and therefore, pages of Appendix B that include shelter information are nonpublic. Since every possible shelter is not opened during every event, the data is not made public in order to ensure that individuals in need of shelter do not seek it at facilities which may remain closed during a particular event. The Town of Nassau has access to shelter data and will coordinate with the Red Cross as part of their standard operating procedures if and when a need is identified for local shelters to be opened in the community.

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<sup>10</sup> Source: Local Capability Assessment

<sup>11</sup> Source: Local Capability Assessment

### 8.10.13 FUTURE NEEDS - RISK/VULNERABILITY

The Town of Nassau has identified no future needs to better understand risk/vulnerability in the community.

### 8.10.14 PLAN INTEGRATION

For a community to succeed in reducing risk in the long term, the information and recommendations of the hazard mitigation plan must be integrated into day-to-day local government operations. Throughout the planning process, partnerships are formed between departments and agencies, and sustained actions between these partners will increase the community's resilience to disasters. "Plan integration" can be thought of as the process whereby a local government incorporates the mitigation plan findings and projects into other planning mechanisms (governance structures that are used to manage local land use development and community decision making).

It is the intention of the Town of Nassau to incorporate mitigation planning as an integral component of daily municipal operations. The balance of this subsection describes local accomplishments over the last planning cycle (2011-2019), and targeted activities for the next planning cycle (2019-2024).

Demonstration of Progress over the Last Planning Cycle (2011-2019) – The Town of Nassau undertook the following plan integration mechanisms over the last planning cycle:

- Issued a letter to each community department head to solicit their support and explore opportunities for integrating hazard mitigation planning objectives into daily activities.
- Worked with the Planning Department to educate them on the Hazard Mitigation Plan and encourage that on the next update of the master plan, general or comprehensive plan, hazard mitigation for natural hazards is addressed. All departments within town government work hand in hand and are apprised. Town also developed Emergency Preparedness Committee comprised of representatives from all emergency service partners in town as well as town planning board, Town supervisor, Deputy Supervisor and Highway Superintendent
- Worked with the Department of Public Works to adopt more rigorous procedures for inspecting and cleaning debris from streams and ditches (i.e., more frequently). Highway department has no jurisdiction to enter streams as it is a permitted requirement through NYSDEC. Highway department regularly does maintenance ditching throughout town.

Targeted Plan Integration Activities for the Next Planning Cycle (2019-2024) – The Town of Nassau plans to implement the following plan integration mechanisms into local government operations from this point forward through the next planning cycle:

- Issue a letter to each department head to solicit their support and explore opportunities for further integration of hazard mitigation into the daily activities of the community as a whole.
- Incorporate hazard mitigation for natural hazards in the next update of the master, general or comprehensive plan.
- Add a specific hazard mitigation element to the next update of the master, general or comprehensive plan.
- Adopt and enforce the minimum building standards established in the current State-adopted IBC (NY edition).
- Maintain community participation in FEMA's National Flood Insurance Program.
- Enforce codes and standards beyond FEMA minimum requirements.
- Join (or continue to maintain participation in) the NFIP's Community Rating System.
- Steer growth and development away from high risk locations by using the risk assessment from the hazard mitigation plan as a tool to monitor future updates of community land use plans, zoning and subdivision codes and the development review process.
- Modify work plans, policies or procedures to include hazard mitigation concepts/activities.
- Revise job descriptions to include mitigation-related duties to further institutionalize mitigation.
- Issue directives to require departments/agencies in the community to carry out certain hazard mitigation activities.
- Add hazard vulnerability to subdivision and site plan review criteria.
- Perform inventories of historic sites in hazard areas in your community to identify where special treatment may be needed to protect them from specific natural hazards.
- Require the Department of Public Works to inspect and clean debris from streams and ditches more frequently. Cannot work within streams per NYSDEC without permit; X – yes to ditches.
- Perform inventories of historic sites in hazard areas in the community to identify where special treatment may be needed to protect them from specific natural hazards.
- Reach out to state agencies for assistance with natural hazard mitigation activities.
- Adopt (or continue to enforce) a local stormwater management plan/ordinance.
- Protect life and property in high hazard areas by limiting densities of new development.
- Increase resilience by limiting the extension of public infrastructure in high hazard areas.
- Reduce the vulnerability of future development in high hazard areas by reviewing development regulations and modifying where needed.
- Use the risk assessment to inform future updates of the community emergency operations plan, evacuation plan, and/or post disaster recovery plan.
- Implement hazard mitigation activities through existing plans and policies.
- Sponsor training on best practices for hazard mitigation for local government staff. (Note: this may be accomplished with other local governments.)

## 8.10.15 MITIGATION STRATEGY

This subsection sets forth the mitigation strategy for the Town of Nassau. It describes:

Progress on 2011 HMP Initiatives  
Past Mitigation Accomplishments  
Proposed 2019 HMP Mitigation Initiatives  
Action Worksheets

### 8.10.15.1 Progress on 2011 HMP Initiatives

The following table was completed by the Town of Nassau HMP Committee Members. It summarizes the progress that was made on the local hazard mitigation initiatives that were set forth in the community's mitigation strategy from the initial HMP in 2011.

Overall priorities of the Town of Nassau have not changed since 2011. The Town continues to upgrade infrastructure as needed (culverts, etc.) and has formed an Emergency Preparedness Committee and has monthly meetings with all heads of emergency services and public officials within town and performs mock table top and site specific drills.

PROGRESS ON 2011 HAZARD MITIGATION PLAN INITIATIVES												
2011 HMP Initiative Number	Mitigation Initiative Description	2011 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
NT-1	Culvert/Bridge upgrades, replacements, drainage improvements to Old Mill Pond, Krouner, Clarkes Chapel, Mashodack, Fredenburg, Alps Mt., McGill, Dusenberry Roads. Replace functionally or structurally obsolete large culverts/bridges.	High	Flooding, road closures, road washouts, land and embankment erosion	Highway Department, Town Board			X		Budget/Lack of Federal and State Support	X		Still making improvements as time and budget allows
NT-2	Ice and Windstorm. Continue to widen/cutback town road right of ways to improve/prevent road blockage due to downed trees in ice and windstorm events.	Medium	Power outages, public safety, improve sun exposure onto roadways	Highway Department, Town Board			X		Budget/Lack of Federal and State Support	X		Still making improvements as time and budget allows
NT-3	Complete Emergency Preparedness Plan of which town has a working draft plan in place and further implement disaster coordination and planning. Hold mock table top drills. Continue to educate town residents of plan and disaster relief options. Emergency Preparedness Committee in place.	High	Flooding, ice storms, natural disasters, tornado, lightning	Town Board	X				completed		x	completed
NT-4	New Draft Town Comprehensive plan adopted. This plan articulates the goals, objectives, policies and recommendations pertaining to governmental services and land use within the town. Encourage consistent emergency service address labeling in new and existing development. Require the siting of new development, public services, and utilities to minimize the potential risk from man-made or natural disasters. The Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) have and should continue to be made available at the Nassau Town Hall for residents' use. Regulations should be amended to require applicants for Subdivision and Site Plan approval to show mapped floodplains with submitted application materials. The Town of Nassau has and should continue to discourage inappropriate development within FEMA flood hazard areas and encourage compliance with NFIP regulations. Ensure that critical facilities are capable of operating during a manmade or natural disaster. The Town of Nassau has and should maintain an Emergency Management Plan in accordance with FEMA regulations and guidelines.	High	Flooding, land use, disaster preparedness and coordination	Town Board	X				completed		x	completed

PROGRESS ON 2011 HAZARD MITIGATION PLAN INITIATIVES												
2011 HMP Initiative Number	Mitigation Initiative Description	2011 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
NT-CL-1	Public awareness program on Hazards, Prevention, and Mitigation: County will maintain a hazard mitigation and mitigation planning web presence (local municipal web sites to link up to this site, if they haven't already done so); all participating jurisdictions to support preparation of a joint annual hazard mitigation and mitigation planning fact sheet and its distribution; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/tv announcements, etc. at the discretion of each jurisdiction (incorporating as much free information as possible from the FEMA Publications Warehouse and other appropriate sources). (public education) Town continues to provide public information on website and available at town hall	High	All hazards	County-led action item. CPG Member, Town Supervisor			x		Town continues to provide information on hazard mitigation through public meeting and town website	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
NT-CL-2	Code update: Review existing local codes and ordinances against the identified hazards to determine whether there need to be any amendments to address identified hazards and, where a need is identified, modify/ amend the codes/ordinances as applicable. (prevention) Town has determined that need was not identified to modify/amend any local codes/ordinances.'	Medium	All hazards	County-led action item. CPG Member, Town Supervisor			x		Town has determined that need was not identified to modify/amend any local codes/ordinances.'	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
NT-CL-3	Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training. (prevention) Town staff including CEO continually updates and seeks new training	Medium	All hazards	County-led action item. CPG Member, Town Supervisor			x		Locally administered on an ongoing basis; our community did not have a need to go to the county for support/training.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
NT-CL-4	Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department (prevention) Town has a Comprehensive plan updated and passed in July of 2011.	High	All hazards	County-led action item. CPG Member, Town Supervisor			x		Plan updated July of 2011	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
NT-CL-5	Hold periodic workshops for municipalities regarding zoning and planning issues that arise regarding natural hazards and hazard mitigation. (prevention)	Low	All hazards	County-led action item. CPG Member, Town Supervisor			x		County- led activity. Municipality attends meetings/workshops as offered by the County whenever municipal staff members have schedule availability.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
NT-NFIP-1	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	Medium	Flooding	Building Department			x		Ordinance is dated 1987. Not updated because not known	x		Ongoing type of activity; will be carried forward with no changes.

PROGRESS ON 2011 HAZARD MITIGATION PLAN INITIATIVES												
2011 HMP Initiative Number	Mitigation Initiative Description	2011 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
NT-NFIP-4	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	Medium	Flooding	Town Board			x		FEMA has not issued new FIRMs since the last hazard mitigation plan was prepared.	x		Ongoing type of activity; will be carried forward with no changes.
NT-NFIP-5	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	High	Flooding	Town Board				x	Not agency required; municipality opted not to require CFM certification.		x	Not agency required; municipality opted not to require CFM certification.
NT-NFIP-6	Join the Community Rating System (CRS)	Medium	Flooding	Town Board				x	Municipality opted not to enter CRS.		x	Municipality has reevaluated in 2019 and has opted not to carry forward.

### 8.10.15.2 Past Mitigation Accomplishments

NYS DHSES requires the documentation of local mitigation efforts and accomplishments since the previous hazard mitigation plan was prepared, regardless of funding source and regardless of whether the project was included in the prior plan. They note that the goal of this requirement is to provide a context for each jurisdiction's projects, act as a source of ideas for mitigation projects, and evaluate the accuracy of assumptions and engineering solutions to inform future projects, and to support future mitigation planning and its coordination with other planning, zoning, and environmental procedures within the jurisdiction.

The Town of Nassau has not reported additional past mitigation accomplishments from the time the 2011 HMP was approved through its first update in 2019.

### 8.10.15.3 Proposed 2019 HMP Mitigation Initiatives

The process for selection and prioritization of mitigation actions is described in greater detail in Section 5 of the main text. The outcomes of that overall process are summarized here.

This plan proposes the actions determined to be the most appropriate for the resources and capabilities of the community based on the experience of local officials, with input from the public and other stakeholders. The relatively large number of flood mitigation actions reflects the fact that flooding is the hazard of greatest concern. Actions determined to be appropriate for the plan were reviewed during public and committee meetings and there was consensus that those intended to mitigate the effects of flooding should be the highest priorities for most communities. As with the 2011 Plan, this 2019 Plan Update includes a series of County-led initiatives with municipal participation to address a wider range of hazards. In addition, each local mitigation strategy proposes actions reflecting the commitment of the County and local jurisdictions to compliance with requirements of the NFIP. Potential actions were reviewed relative to potential financial as well as administrative and legal costs and the degree to which they would be endorsed by the public. Potential actions were reviewed during the meetings relative to their potential benefit of effectiveness in saving lives, protecting the natural environment, and reducing disruption and damage. Actions selected by each jurisdiction include activities to protect existing and future structures and infrastructure and enhance community resilience.

Part of enhancing community resilience involves adapting to a changing climate. In accordance with NYS Mitigation Planning Standard 9, plans developed with NYS DHSES-administered funds must include information on climate change as part of the hazard vulnerability analysis and contain strategies/projects to address increased vulnerability that may result from climate change. This requirement was established to encourage jurisdictions to plan for and accommodate climate change and sea level rise. By developing mitigating strategies and/or projects for hazards that are exacerbated by climate change, jurisdictions will better protect residents, avoid, or reduce damage to property and public infrastructure, and reduce personal hardship. In accordance with this State Standard, previous sections of this plan have presented information on how climate change may affect jurisdictional vulnerability or increased frequency of occurrence and/or severity in exposure to flooding, wildfire, drought, and extreme temperatures. Climate change is addressed by mitigating the various hazards that it exacerbates. Rensselaer County and its communities have proposed a range of hazard mitigation initiatives to address their highest hazards including those hazards that are exacerbated by a changing climate.

Proposed 2019 HMP Mitigation Initiatives for Town of Nassau are shown in the following table. These include both new initiatives and initiatives that were carried forward from the 2011 HMP.

PROPOSED 2019 HMP MITIGATION INITIATIVES

Initiative Number	Initiative Name	HMP Goal(s)/ Objective(s) Being Met	Hazard(s) to be Mitigated	Description of the Problem	Description of the Solution	CF <sup>12</sup> ?	EHP <sup>13</sup> Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources <sup>14</sup>	Priority <sup>15</sup>	Action Worksheet Provided? <sup>16</sup>
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
1	Kronuner Road Large Culvert/Bridge (New)	3	Flooding	Current structure is structurally and functionally obsolete; under capacity	Upgrade to current standards and improve hydraulic flow. Currently undergoing engineer review and awaiting report	N	N	Ongoing and in planning	Highway Department/ Superintendent	Awaiting engineer review and recommendations	Improve stream flow and upgrade to current standards	WQIP, CHIPS, BridgeNY	H	Yes
2	Road / Culvert Assessment (New)	3,4	Flooding	Town in need of continued full assessment of drainage systems throughout town; many locations under capacity	Catalog, GPS locate, assess need for improvements on town wide large culverts. Upgrade culverts as needed, and time/budget allows	N	N	Ongoing and in planning	Highway Department/ Superintendent	Determined by size and need	Mitigate potential deficiencies	WQIP, CHIPS,	H	Yes
3	Culvert/Bridge upgrades, replacements, drainage improvements to Old Mill Pond, Kronuner, Clarks Chapel, Mashodack, Fredenburg, Alps Mt., McGill, Dusenberry Roads. Replace functionally or structurally obsolete large culverts/bridges. (2011 NT-1)	3,4	Flooding	Flooding, road closures, road washouts, land and embankment erosion	Improve to prevent possible Flooding, road closures, road washouts, land and embankment erosion. Upgrade culverts as needed, and time/budget allows	N	N	Ongoing and in planning	Highway Department/ Superintendent	Determined by size and need	Mitigate potential deficiencies	WQIP, CHIPS, Town Budget	M	N
4	Ice and Windstorm. (2011 NT-2)	3,4	Ice Storm, Winter Storm, Wind	Trees and brush have potential to cause damage, road closures and safety issues. Road closures, safety, site distance, damage to road surface	Improve to prevent possible road closures and damage due to downed trees. Continue to widen/cutback town road right of ways to improve/prevent road blockage due to downed trees in ice and windstorm events.	N	N	Ongoing and in planning	Highway Department/ Superintendent	Determined by size and need	Mitigate potential deficiencies	CHIPS, Town Budget	L	L

<sup>12</sup> CF – Critical Facility. Please respond “Y” (yes) if the project’s purpose is to protect a critical facility, or “N” (no) if not.

<sup>13</sup> EHP – Environmental or Historic Preservation. Please respond “Y” (yes) if the project is expected to have environmental and/or historic preservation issues, or “N” (no) if not.

<sup>14</sup> Potential Funding Sources – A list of Federal and State sources of funding for hazard mitigation projects can be found in the latest NYS Hazard Mitigation Plan online at <https://mitigateny.availabs.org/capabilities/administerfunding>. Jurisdictions should identify additional funding opportunities you may be aware of that are not on the state list.

<sup>15</sup> Priority – See “Prioritization Methodology” on the next page.

<sup>16</sup> Action Worksheet Provided. Please respond “Y” (yes) if you have filled out a detailed Action Worksheet, or “N” (no) if not. NYS DHSES State Standard 7 recommends that further consideration be given to all proposed actions by completing a NYS DHSES Action Worksheet, the State requires completion of a minimum of two NYS DHSES Action Worksheets for the jurisdiction’s highest priority projects. For jurisdictions containing a Special Flood Hazard Area, at least one of these Action Worksheets must be for a project that addresses flooding. Action Worksheets have been prepared for a minimum of two proposed mitigation initiatives. Action Worksheets are included at the end of this section, following the prioritization methodology.

5	Participate in County-Led Hazard Mitigation Outreach (2011 NT-CL-1)	1	All hazards	Residents could benefit from additional information on hazards, risks, and hazard mitigation measures they can take on their own properties to reduce damages and improve resident safety before, during and after a hazard event.	Public awareness program on Hazards, Prevention, and Mitigation: County will maintain a hazard mitigation and mitigation planning web presence (local municipal web sites to link up to this site, if they haven't already done so); all participating jurisdictions to support preparation of a joint annual hazard mitigation and mitigation planning fact sheet and its distribution; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/tv announcements, etc. at the discretion of each jurisdiction (incorporating as much free information as possible from the FEMA Publications Warehouse and other appropriate sources). (public education) Town continues to provide public information on website and available at town hall	N	N	Ongoing	Highway Department/ Superintendent	Unknown	Residents could benefit from additional information on hazards, risks, and hazard mitigation measures they can take on their own properties to reduce damages and improve resident safety before, during and after a hazard event.	Unknown	L	N
6	Request code/ordinance review by County as needed (2011 NT-CL-2)	4	All hazards	Communities are safer and more resilient when new construction and substantial improvements take into account the latest information on hazard vulnerabilities and measures to reduce risk.	Code update: Review existing local codes and ordinances against the identified hazards to determine whether there need to be any amendments to address identified hazards and, where a need is identified, modify/ amend the codes/ordinances as applicable. (prevention) Town has determined that need was not identified to modify/amend any local codes/ordinances.'	N	N	Ongoing	Supervisor	Unknown	Unknown	Unknown	L	N
7	Send CEO to County-Led Training (2011 NT-CL-3)	2	All hazards	There can be a loss of institutional knowledge with staff changes. Even when staff is the same, continual training improves local capabilities and allows officials to better regulate activities in hazard areas to protect lives and property.	Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training. (prevention) Town staff including CEO continually updates and seeks new training	N	N	Ongoing	Supervisor	Unknown	Unknown	Unknown	L	N
8	Send Comprehensive Plan Update to County for Review by County Planning (2011 NT-CL-4)	2,3,4	All hazards	A long term vision for the community that doesn't take into account hazard areas can put lives and property at risk. Taking into account natural hazards and hazard mitigation measures can make the community more resilient.	Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department (prevention) Town has a Comprehensive plan updated and passed in July of 2011.	N	N	Ongoing	Supervisor	Unknown	Unknown	Unknown	L	N
9	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 NTCL-5)	2,4	All hazards	When municipal staff aren't armed with information on zoning and planning issues that sometimes arise regarding natural hazards and hazard mitigation, they may make decisions that don't foster community resiliency.	Hold periodic workshops for municipalities regarding zoning and planning issues that arise regarding natural hazards and hazard mitigation. (prevention)	N	N	Ongoing	Highway Department/ Superintendent	Unknown	Unknown	Unknown	L	N
10	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 NT-NFIP-1)	3,4	Flooding	Outdated ordinances mean that a community is not regulating to the latest codes and standards or hazard information, and that does not foster community resiliency.	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	N	N	Ongoing	Town Board	Unknown	Unknown	Unknown	L	N
11	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 NT-NFIP-4)	3,4	Flooding	Outdated ordinances mean that a community is not regulating to the latest codes and standards or hazard information, and that does not foster community resiliency.	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	N	N	Ongoing	Town Board	Unknown	Unknown	Unknown	L	N

Prioritization Methodology for Proposed 2019 HMP Mitigation Initiatives

To prioritize its mitigation initiatives, the community established a methodology to take into account several key factors. Priorities were determined by a qualitative prioritization process established by the community. A higher priority was assigned to projects where: the life/safety risk of taking no action was deemed to be unacceptably high; the project addresses one of the community's highest hazards and/or key risks; benefits were projected to equal or exceed project costs; critical facilities or key local assets were being protected; funding and staff resources were deemed to be sufficient and/or accessible for project implementation; negative impacts were not anticipated on environmental and/or historic resources or any segment of the population; and/or where there was overall support for the project from the local community (government officials, public, and stakeholders).

PRIORITIZATION METHODOLOGY FOR PROPOSED 2019 HMP MITIGATION INITIATIVES														Priority
Initiative Number	Initiative Name	Hazard(s) Addressed	Is the life/safety risk of taking no action deemed to be unacceptably high?	Does the project address one of the community's highest hazards and/or key risks?	Benefits	Costs	Are the project's benefits estimated to equal or exceed its costs?	Are critical facilities or key local assets being protected by the project?	Are funding resources sufficient and/or accessible for project implementation?	Are staff resources sufficient or available for project implementation?	Are negative impacts anticipated on environmental resources?	Are negative impacts anticipated on historic resources?	Are negative impacts anticipated on any segment of the population?	
1	Kronuner Road Large Culvert/Bridge (New)	Flooding	No	Not determined	Increase hydraulic stream flow	Ongoing to be determined	Yes	Yes? roadway and bridge structure	Never	Yes	No	No	No	H
2	Road / Culvert Assessment (New)	Flooding	No	Yes	Prioritize culvert replacements	Ongoing to be determined	Yes	Yes	Yes/ somewhat	Yes	No	No	No	H
3	Culvert/Bridge upgrades, replacements, drainage improvements to Old Mill Pond, Kronuner, Clarkes Chapel, Mashodack, Fredenburg, Alps Mt., McGill, Dusenberry roads. Replace functionally or structurally obsolete large culverts/bridges. (2011 NT-1)	Flooding	No	Yes	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
4	Ice and Windstorm. (2011 NT-2)	Ice Storm, Winter Storm, Wind	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
5	Participate in County-Led Hazard Mitigation Outreach (2011 NT-CL-1)	All hazards	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
6	Request code/ordinance review by Count as needed (2011 NT-CL-2)	All hazards	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
7	Send CEO to County-Led Training (2011 NT-CL-3)	All hazards	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
8	Send Comprehensive Plan Update to County for Review by County Planning (2011 NT-CL-4)	All hazards	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
9	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 NTCL-5)	All hazards	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
10	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 NT-NFIP-1)	Flooding	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L
11	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 NT-NFIP-4)	Flooding	No	Not determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	Ongoing to be determined	No	No	No	L

### Action Worksheets

NYS DHSES State Standard 7 recommends that further consideration be given to all proposed actions by completing a NYS DHSES Action Worksheet, the State requires completion of a minimum of two NYS DHSES Action Worksheets for the jurisdiction's highest priority projects. Furthermore, for jurisdictions containing a Special Flood Hazard Area, at least one of these Action Worksheets must be for a project that addresses flooding.

Action Worksheets prepared by the Town of Nassau are included on the following pages.

Section 8.10 - Jurisdictional Annex, Town of Nassau

NYS DHSES Action Worksheet			
Project Name:	Kronuner Road Large Culvert/Bridge		
Project Number:	1		
Risk / Vulnerability			
Hazard of Concern:	Flood potential		
Description of the Problem:	Current structure is structurally and functionally obsolete; under capacity		
Action or Project Intended for Implementation			
Description of the Solution:	Upgrade to current standards and improve hydraulic flow. Currently undergoing engineer review and awaiting report		
Is this project related to a Critical Facility?	Yes * <input type="checkbox"/>	No X	
* Projects related to critical facilities must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.			
Level of Protection:	100 year	Estimated Benefits (losses avoided):	Flood potential road closures
Useful Life:	50 year		
Estimated Cost:	Not known as yet - High		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Not known due to budget constraints
Estimated Time Required for Project Implementation:	Not known	Potential Funding Sources:	BridgeNY
Responsible Party: (Department/ Organization)	Highway Department	Local Planning Mechanisms to be Used in Implementation, if any:	Engineering consultants
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Not viable- Continued flooding and damage
	Continued maintenance of existing	Moderate	Not viable- unwise use of funds to continue to pay to patch up a structure that's under capacity
	Upgrade	High	Best solution- responsible use of limited funding, eliminates flooding and damage
Progress Report (this section to be completed at next plan update-do not fill in now)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Section 8.10 - Jurisdictional Annex, Town of Nassau

NYS DHSES Action Worksheet			
Project Name:	Road / Culvert Assessment		
Project Number:	2		
Risk / Vulnerability			
Hazard of Concern:	Any current in place culvert or structure that is undersized or structurally deficient		
Description of the Problem:	Some culvert or structure may be undersized or structurally deficient		
Action or Project Intended for Implementation			
Description of the Solution:	Do full road by road assessment. Catalog, GPS locate, assess need for improvements on town wide large culverts. Upgrade culverts as needed and time, budget allows		
Is this project related to a Critical Facility?	Yes * <input type="checkbox"/>	No X	
* Projects related to critical facilities must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.			
Level of Protection:	100 year	Estimated Benefits (losses avoided):	Mitigate Flood potential road closures
Useful Life:	50 year		
Estimated Cost:	Not known		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Ongoing
Estimated Time Required for Project Implementation:	Currently being undertaken	Potential Funding Sources:	Town Budget
Responsible Party: (Department/ Organization)	Highway Department	Local Planning Mechanisms to be Used in Implementation, if any:	Steam stats, historic data sets and projections
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Not viable- town is responsible for remedying deficiencies
	Buyout structures that will be flooded because of undersized culverts	Excessively high	Not viable- too expensive, and still leaves the road and pipes damaged in the future
	Upgrade culverts	High	Viable but grant funds will be needed and it will need to be implemented as funding allows
Progress Report (this section to be completed at next plan update-do not fill in now)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			