

8.17 - Jurisdictional Annex, Town of Sand Lake

This section presents the jurisdictional annex for the Town of Sand Lake. 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.

8.17.1 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: Nancy W. Perry Title: Supervisor Address: 8428 State Route 66, Sand Lake, NY 12153 Phone Number: 518-674-2026 ext. 112 E-mail Address: nperry@sand-lake.us			Name: Andrew Bulmer Title: Councilman Address: 8428 State Route 66, Sand Lake, NY 12153 Phone Number: 518-674-2026 ext. 122 E-mail Address: abulmer@sand-lake.us			
Jurisdictional Assessment Team Members						
Local Jurisdiction Role/Position	Name	Email	Phone	Date of Invitation	Method of Invitation	Agreed to participate?
Land Use/Community Planner	Karol O'Sullivan	kosullivan@sand.lake.us	518-674-2026, ext 117	12/20/2018	In person	Yes
Emergency Manager	Nancy W. Perry	nperry@sand-lake.us	518-674-2026, ext 112	self	n/a	Yes
Floodplain Manager/Administrator	Michael Wager	mwager@sand-lake.us	518-674-2026, ext. 116	12/20/2018	In person	Yes
Public Works Director / City Engineer	Brian Hunt	highway@sand-lake.us	518-672-2026, ext. 101	12/20/2018	In person	Yes
Building Code Official	Michael Wager	mwager@sand-lake.us	518-674-2026, ext. 116	12/20/2018	In person	Yes
Fiscal/Budget Officer	Melissa Elaqua	melaqua@sand-lake.us	518-674-2926, ext. 114	12/20/2018	In person	Yes
Manager/Administrator	Nancy W. Perry	nperry@sand-lake.us	518-674-2026, ext 112	self	n/a	Yes
Elected Officials	Andrew Bulmer	abulmer@sand-lake.us	518-674-2026, ext. 122	12/26/2018	Board resolution	Yes
Local Hospital	N/A					
Major University	N/A					
Significant Business	N/A					
Neighboring County 1	N/A					
Neighboring County 2	N/A					
Neighboring County 3	N/A					
Neighboring County 4	N/A					
Tribal Group/Nation	N/A					

8.17.2 JURISDICTION PROFILE

8.17.2.1 Location and Land Area

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

According to the 2010 U.S. Census, Rensselaer County has a total area of 665 square miles (1,720 km²), of which 652 square miles (1,690 km²) is land and 13 square miles (34 km²) (1.9%)

is water. Of that, the Town of Sand Lake has a total area of 36.17 square miles (93.68 km²), of which 35.05 square miles (90.78 km²) is land and 1.12 square miles (2.90 km²) is water.

8.17.2.2 Population

According to the 2010 U.S. Census Bureau's American Community Survey 5-Year Estimates, the population of Town of Sand Lake is estimated to be 8,530 persons.

8.17.2.3 Demographics

Of a total area of 36.15 square miles (2010 Census data), the land area is 35.20 square miles and population per square mile is 226.9 persons.

Of the total population, there are 98.3 males per 100 females (all ages). Persons under 18 years of age represent 23.1% of the population, and 12.2% 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 469, or 5.9%, of which 33.9% 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, 92.5% are high school graduates or higher, and 27.4% 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 3,353 total households and 2.54 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 total number in group quarters are 8 or 0.1 % overall, with 0 (0.0%) institutionalized and 8 (0.1%) noninstitutionalized population. 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 \$87,259; the per capita income in past 12 months (2017) was \$40,117; and the percentage of persons in poverty was 4.6%. 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 9.2%, and percentage of people with a disability over age 65 years is 29.6%. The total percentage of persons (civilian, noninstitutionalized) without health insurance is 3.3%. 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.

8.17.2.4 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 first permanent settlements in Sand Lake were made in its western part, probably in 1765 or 1766. The earliest inhabitants located in the western part of the town. They were sturdy Dutch farmers who had come from the Netherlands a few years after the settlement of Albany, or who had first located further down the valley of the Hudson. The Town of Sand Lake was formed from Greenbush and Berlin June 19, 1812. In 1843 a part of Greenbush was taken off, and in 1848 the northern half was set off as a separate town under the name of Poestenkill.

8.17.2.5 Governing Body Format

The Town of Sand Lake is governed by a five-member Town Board that consists of the Town Supervisor, who serves a two-year term, and four Council members, who serve four-year terms.

8.17.2.6 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 Sand Lake reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019.

The Town of Sand Lake did not note any major residential or commercial development taking place, or any major infrastructure development planned for the next five years in the municipality. Residential development continues to be the predominant trend in the Town of Sand Lake (primarily low to moderate density). Commercial development may become more attractive if and when a water district is constructed. Minimum lot size for new residential development is currently one acre with a minimum of one hundred fifty feet of road frontage. The Town Zoning Code includes the opportunity for development through Planned Development Districts (PDDs) which ensure the Town has proper oversight of large -scale development. The Town of Sand Lake is primarily rural in nature and residential development is occurring for the most part in undeveloped woodlands and open fields.

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 of Sand Lake enforces MS4 stormwater requirements to protect new development from the effects of natural hazards. Regarding floodplain management ordinances, the Town adopted Local Law L.L. No. 2-1989 February 9, 1989. This local law is contained in Chapter 122 Flood Damage Prevention. This local law is enforced by the Town’s Deputy Commissioner/Floodplain Administrator, who maintains copies of the FIRM and floodway maps. Sand Lake monitors development in its flood hazard zones. Buildings must be raised above the base flood elevation. The BFE to be determined by a NYS licensed surveyor or floodproofed as per design by a NYS licensed Architect or Engineer. We have no steep slope ordinances. No wildfire hazard ordinance. Our NYS Design Criteria/Specifications are enforced by our Building Department (Ground Snow Loads 40; Seismic: Category A; Wind Speed: (3 sec. gust) @ 90mph).

8.17.3 HAZARD IDENTIFICATION

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

Profiled Hazards in the Town of Sand Lake													
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 ⁴	Wildfire ⁵
								Flooding ²	Dam Failure ¹	Ice Jam ³			
Sand Lake, 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.

8.17.4 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 NCDC 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 NCDC 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
2011	August 26, 2011 through September 5, 2011	Major Disaster Declaration	Hurricane Irene	DR-4020	Declared for PA and IA

Rensselaer County Disaster Declarations, 2011-2018					
Declaration Year	Event Incident Period	Declaration Type	Disaster Type	Disaster Number	Rensselaer County Designation
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 Sand Lake since 2011 include:

August 28, 2011 – Irene

The remnants of Hurricane Irene brought heavy to extreme rainfall throughout Rensselaer County. In the Town of Sand Lake, portions of Route 43 in West Sand Lake were reported closed due to flooding, including between Geiser Road and Mammoth Spring Road, and between Route 150 and Route 351.

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.

May 22, 2013 – Thunderstorm Wind

Thunderstorms brought heavy rain and strong winds across the Capital Region. Trees and wires were reported down in Sand Lake.

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.

8.17.5 NATIONAL FLOOD INSURANCE PROGRAM SUMMARY

The Town of Sand Lake has participated in FEMA's National Flood Insurance program (NFIP) since May 15, 1980.

- Total number of policies¹: 31
- Insurance in force²: \$7,737,000
- Total number of losses: 11
- Total claims paid: \$63,141
- Repetitive Loss Properties: 2
- Severe Repetitive Loss Properties: 0

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

¹ Policies in Force from www.fema.gov on 02/21/19, data current as of 09/30/18.

² Insurance in Force from www.fema.gov on 02/21/19, data current as of 09/30/18.

Name: Michael Wager Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator for the Town of Sand Lake
 Community: Town of Sand Lake Email and Phone: mwager@sand-lake.us



Worksheet 2 - NFIP

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 anna.foley@aecom.com. 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.

Adoption Date of your Current Floodplain Management Ordinance	Date of Entry into NFIP ¹	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?		
2/8/1989	5/15/1980	Building Inspector	<input checked="" type="checkbox"/> Yes <input 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.):							
The Town of Sand Lake conducts inspections, undertakes permit reviews, does outreach for third-party elevation certificates, and meets with citizens who have questions regarding flood plains.							
Describe barriers to running an effective NFIP program in the community (if applicable):							
The FEMA maps for the Town of Sand Lake date back to 1980 and need to be updated.							
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?
2014	<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):							

¹ Your date of entry into the NFIP can be found at: <http://www.fema.gov/cis/NY.html> (column "Reg-Emer Date").

Rensselaer County Multi-Jurisdictional Hazard Mitigation Plan Update – NFIP Worksheet NFIP-1

Name: Michael Wager Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator
 Representing: Town of Sand Lake Email and Phone: mwager@sand-lake.us (518) 674-2026, ext. 116



Provide an explanation of your local floodplain permitting process:

The Building Inspector, who is also the Floodplain Manager, answers all questions and reviews all building permits that have potential floodplain implications.

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 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?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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?					
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> 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:								
The Town of Sand Lake assists citizens in determining base flood elevations. In addition, our Highway Department is vigilant about ensuring our culverts and ditches are clear, and continuously monitors water flow near and on town roads.								
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?				
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Note: NFIP policy statistics by community are maintained at: <http://bsa.nfipstat.fema.gov/reports/1011.htm#NTI>
 NFIP claims data by community is maintained at: <http://bsa.nfipstat.fema.gov/reports/1040.htm#34>

Rensselaer County Multi-Jurisdictional Hazard Mitigation Plan Update – NFIP Worksheet NFIP-2

8.17.6 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 County³ and the subset of those assets that fall within the Town of Sand Lake.

³ 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 ⁴)	Emergency Facilities					Critical Infrastructure and Utilities										Other Key Facilities		Historic and Cultural Resources
		Fire Stations	Police Stations	EMS / Ambulance Stations	Hospitals	Shelters ⁵	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 ⁶	
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 Sand Lake	\$1,782,955,000	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	4	0	2
Rensselaer County	Population, Census 2010:		159,429																
Town of Sand Lake	Population, Census 2010:		8,530																
Rensselaer County	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)		30,429																
Town of Sand Lake	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)		1,473																

⁴ Replacement Cost Value

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

⁶ * 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 six percent of land in the Town of Sand Lake 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 (%)
Sand Lake, Town of	23,088	1,305	6%

Improved Property. Approximately five percent of improved property in the Town of Sand Lake 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 (%)
Sand Lake, Town of	\$1,782,955,000	\$97,593,476	5%

Population. Approximately four percent of the population of the Town of Sand Lake resides 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
Sand Lake, Town of	8,530	374	4%

Critical Facilities. No critical facilities (emergency facilities, critical infrastructure and utilities, and other key facilities, as presented in Section 3b) are located in the floodplain in the Town of Sand Lake.

Historic and Cultural Resources. The following historic and cultural resources are located in the floodplain in the Town of Sand Lake.

Historic and Cultural Resources in the Floodplain			
Municipality	Historic Structure/Landmark/District	Location/Address	Flood Zone ⁷
Sand Lake, Town of	Fox, Albert R., House	2801 NY 43 and 66	A/AE/AO

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

8.17.7 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 Sand Lake, the hazard with the highest estimated average annual losses is flooding.

Summary of Annual Loss Estimates – Town of Sand Lake⁸

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
Sand Lake, Town of	\$1,782,955,000	\$75	\$896	\$4,619	\$574	\$25,346	\$6,420	\$1,799	\$0	\$103,840	\$4,472	\$0	\$5

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

8.17.8 HAZARD RANKINGS AND KEY RISK FINDINGS

Hazard rankings for the Town of Sand Lake 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 Sand Lake's highest hazard.

Hazard Rankings – Town of Sand Lake					
Hazard	Future Probability	Potential Consequence	Relative Risk	Hazard Priority	Average Annualized Losses ⁹
Extreme Temperatures (Coldwave/ Heat Wave)	Low	Low	Low	Low	\$75
Hurricane/ Tropical Storm	Low	High	Moderate	Moderate	\$ 896 Wind; \$4,619 Wind + Flood
Lightning	High	Low	Low	Low	\$574
Tornado	Low	High	High	High	\$25,346
Wind	High	Low	High	High	\$6,420
Winter Storm (Ice Storm/Snow Storm)	High	Moderate	Moderate	Moderate	\$1,799
Drought	Low	High	Low	Low	\$0
Flood	High	High	High	High	\$103,840
Earthquake	Low	High	Moderate	Moderate	\$4,472
Landslide	Lo	Low	Low	Low	\$0
Wildfire	Low	Low	Low	Low	\$5

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

- The Town's existing floodplain maps date back to 1980 and are inaccurate.
- The Town does not have an Emergency Action Plan to use in case there is an issue with one of the dams. Potential loss of life and/or property associated with dam breach.
- Orchard Lane Culvert is old and undersized and in need of replacement in the next couple of years to accommodate passage of increased flows.
- The Wynantskill Creek may need to be dredged. The Town will know more once floodplain maps are received.
- During snow storms, ice storms, and high wind events tree limbs/branches sometimes fall on powerlines causing power outages. This is particularly dangerous during the winter months when heat is affected by the outage and temperatures are below freezing.

⁹ 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.

- 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.

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

8.17.9 OUTREACH TO THE PUBLIC AND OTHER STAKEHOLDERS

As part of this 2019 Plan Update, the Town of Sand Lake 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 of Sand Lake included:

Outreach Activities			
Date of Activity	Type of Activity	Activity Details	Lead Department and/or Staff Title Who Undertook Activity
December 2018	Supervisor included Hazard Mitigation information on Town website and in her local newspaper column	Town website update and local newspaper update	Town Supervisor
February 2019	Discussion at Town Board Meeting	The Town Supervisor discussed the Hazard Mitigation Plan at a Town Board meeting.	Town Supervisor
April 2019	Public Meeting regarding Citizen Preparedness	Supervisor informed attendees that the Town was updating the Hazard Mitigation Plan	Supervisor
June 2019	Town Board Workshop Meeting	Supervisor updated residents on Hazard Mitigation activities	Supervisor
July 2019	Town Board Business Meeting	Supervisor updated residents on Hazard Mitigation activities	Supervisor

The Town of Sand Lake has received no comments to date as a result of its outreach activities.

8.17.10 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.

8.17.10.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Sand Lake. 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	Town	Section 88, Sand Lake Town Code
b. Zoning ordinance	Y	Town	Section 250, Sand Lake Town Code
c. Subdivision ordinance or regulations	Y	Town	Section 225, Sand Lake Town Code
d. Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Town	Section 217 and Section 218, Sand Lake Town Code
e. Growth management ordinances (also called "smart growth" or anti-sprawl programs)	Y	Town	Section 250, Sand Lake Town Code
f. Site plan review requirements	Y	Town	Section 250, Sand Lake Town Code
g. General, comprehensive or master plan	Y	Town	Town of Sand Lake Comprehensive Plan
h. A capital improvements plan	N		
i. An economic development plan	Y	Town	Town of Sand Lake Comprehensive Plan
j. An emergency response plan	Y	Town	Town of Sand Lake Disaster Plan
k. A post-disaster recovery plan	N		
l. A post-disaster recovery ordinance	N		
m. Real estate disclosure requirements	N		
n. Other			

8.17.10.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Sand Lake. 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	Planning and Zoning Department - Planner
b. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	N	
c. Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N	
d. Floodplain manager	Y*	Building Inspector
e. Surveyors	N	
f. Staff with education or expertise to assess the community's vulnerability to hazards	N	
g. Personnel skilled in GIS and/or HAZUS	N	
h. Scientists familiar with the hazards of the community	N	
i. Emergency manager	N	
j. Grant writers	Y	Planner
k. Staff with expertise or training in benefit/cost analysis	Y	Supervisor
*All communities participate in the National Flood Insurance Program; as such, they are required by the regulations to have an appointed floodplain manager.		

8.17.10.3 Fiscal Capability

The table below summarizes financial resources available to the Town of Sand Lake. 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	No
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	No
h. Incur debt through private activity bonds	Yes
i. Withhold spending in hazard-prone areas	No
j. State mitigation grant programs	Yes
k. Other – State and Federal Grants	Yes

8.17.10.4 Overall Capabilities

The Town of Sand Lake’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
Moderate	Low	Low	Moderate	Moderate
How these capabilities can be expanded and/or improved to reduce risk:				
The Town of Sand Lake is working to improve our communication with our residents. We recently developed a new website that is more user-friendly and contains current information. However, the Town has limited financial resources and cannot hire engineers, surveyors, or other technical positions on a full-time basis. There also is a general reluctance among the public to enact new laws which are perceived to interfere in the daily lives of our citizenry.				

8.17.10.5 Community Classifications

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

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 Sand Lake’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/>

8.17.11 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.

8.17.12 PLAN FOR EVACUATION NEEDS AND SHELTERING

The Town of Sand Lake has an emergency response plan¹⁰. It does not have a post-disaster recovery plan or a post-disaster recovery ordinance¹¹. 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 Sand Lake 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.

¹⁰ Source: Local Capability Assessment

¹¹ Source: Local Capability Assessment

8.17.13 FUTURE NEEDS - RISK/VULNERABILITY

The Town of Sand Lake has identified future needs to better understand risk/vulnerability in the community. The Town has prioritized updated flood maps as one of its two top priority projects, noting that effective flood maps are dated 1980.

8.17.14 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 Sand Lake 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 Sand Lake undertook the following plan integration mechanisms over the last planning cycle:

- Coordinated with the building department (via meeting with the code enforcement officer) to ensure that they have adopted and are enforcing the minimum standards established in the current State-adopted IBC.
- Community currently has a local zoning ordinance.]

Targeted Plan Integration Activities for the Next Planning Cycle (2019-2024) – The Town of Sand Lake 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.
- 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.
- Add hazard vulnerability to subdivision and site plan review criteria.
- 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.)

8.17.15 MITIGATION STRATEGY

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

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

8.17.15.1 Progress on 2011 HMP Initiatives

The following table was completed by the Town of Sand Lake 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 community in recent years have include more attention placed on maintaining infrastructure. The Highway and the Building and Planning Departments have been reorganized and re-energized to ensure they are meeting the needs of our citizens. This effort also increases attention on emergency management and hazard integration.

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	
SL-1	Updating Floodplain Maps. Submit request to FEMA to update the existing floodplain maps, which date back to 1980 (much development has occurred since that time).	High (1)	Flooding	Building and Planning				x	Work on this initiative has not started.	x		The town will submit a request to FEMA to update the existing floodplain maps.
SL-2	Dredging Wynantskill Creek (5-7 miles) and bridgework to reduce losses due to flooding in floodplain areas.	High (2)	Flooding	Highway and Building				x	Work on this initiative has not started.	x		This initiative will be reevaluated once the updated floodplain maps are received.
SL-3	Repair dams to reduce losses. Reduce losses due to dam failure by investigating sources of funding to assist private dam owners to complete required repairs/maintenance.	4 (Medium)	Flooding and dam failure	Highway				x	This initiative, as presented, misrepresents dams in the town. There are 5 dams in Sand Lake, but the town does not own any of them. As such, we cannot "repair" dams.		x	Since 2018, the town has reached out to the dam owners to learn the condition of the dams and obtain all mandatory DEC reports. We plan to update our Emergency Action Plan to reflect the importance dams have in our community.
SL-4	Reduce losses due to snow and ice storms by implementing ice and windstorm-resistant trees and landscaping practices to reduce tree related hazards.	3 (High)	Winter storms, high winds	Highway			x		This is an ongoing activity.	x		The town will continue this activity.
SL-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)	High	All hazards	County-led action item. CPG Member, Town Supervisor				x	The town held a dam safety seminar in 2017.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SL-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)	Medium	All hazards	County-led action item. CPG Member, Town Supervisor				x	No activity occurred during the past several years.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SL-CL-3	Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training. (prevention)	Medium	All hazards	County-led action item. CPG Member, Town Supervisor				x	Code Enforcement Officers did attend trainings.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SL-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)	High	All hazards	County-led action item. CPG Member, Town Supervisor				x	The town has a Comprehensive Master Plan. The Plan focuses on economic development and preservation of natural resources.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.

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	
SL-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.
SL-NFIP-1	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	High	Flooding	Building Department			x		Ordinance is dated 1989. Not updated because previous administrations did not undertake the responsibility.	x		Ongoing type of activity; will be carried forward with no changes.
SL-NFIP-4	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	Medium	Flooding	Building Department and Zoning			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.
SL-NFIP-5	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	High	Flooding	Building Department				x	Not agency required; municipality opted not to require CFM certification.		x	Not agency required; municipality opted not to require CFM certification in future
SL-NFIP-6	Join the Community Rating System (CRS)	Medium	Flooding	Building Department				x	Municipality opted not to enter CRS.		x	Municipality reviewed and opted not to initiate the process during the next planning cycle.

8.17.15.2 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 Sand Lake has no additional past mitigation accomplishments to report from the time the 2011 HMP was approved through its first update in 2019.

8.17.15.3 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 Sand Lake 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 ¹² ?	EHP ¹³ Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁴	Priority ¹⁵	Action Worksheet Provided? ¹⁶
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
1	Update Floodplain Maps (2011 SL-1)	1,2,3,4	Flooding	Inaccurate floodplain maps. Submit request to FEMA to update the existing floodplain maps, which date back to 1980.	Current and accurate maps will allow the town to make intelligent emergency management decisions.	No	No	2019-2020	Code Enforcement Officer, Building Department	None	Ability to access accurate information in a timely fashion	Town Budget	High	Yes
2	Develop Dam Emergency Action Plan NEW	1,2,3,4	Flooding	The Town does not have an Emergency Action Plan to use in case there is an issue with one of the dams. Potential loss of life and/or property associated with dam breach.	A current Emergency Action Plan will help mitigate any potential disasters.	No	No	2019-2020	Town Council Member	\$1,000	Ability to use the plan in an emergency and prevent unnecessary loss of time	Town Budget	High	Yes
3	Replace Orchard Lane Culvert NEW	2,3,4	Flooding	Orchard Lane Culvert is old and undersized and in need of replacement in the next couple of years to accommodate passage of increased flows.	A new culvert will help alleviate potential flooding issues, especially associated with extreme weather.	No	No	2021	Town Highway Department	\$5,000	Prevention of Orchard Lane washout	Grants/Town Budget	Medium	No
4	Investigate dredging the Wynantskill Creek (5-7 miles) (2011 SL-2)	1,2,3,4	Flooding	The Wynantskill Creek may need to be dredged. The town will know more once floodplain maps are received.	Dredging the creek may aid in flooding mitigation.	No	No	2022	NYS DEC, Army Corps of Engineers, Rensselaer County, Sand Lake Highway Department	\$100,000	Mitigation of flooding	Grants	Medium	No
5	Reduce Tree Related Hazards (2011 SL-4)	3,4	Snow Storm, Ice Storm, Wind	During snow storms, ice storms, and high wind events tree limbs/branches sometimes fall on powerlines causing power outages. This is particularly dangerous during the winter months when heat is affected by the outage and temperatures are below freezing.	Reduce losses due to snow and ice storms by implementing ice and windstorm-resistant trees and landscaping practices to reduce tree related hazards.	No	No	Initiate 2020; Ongoing implementation through 2024	NYS Department of Transportation, Rensselaer County Highway Department, Town of Sand Lake Highway Department	\$50,000 annually	Reduced likelihood for power outages during snow, ice and high wind events	Government Budgets	Medium	No
6	Participate in County-Led Hazard Mitigation Outreach (2011 PI-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)	No	No	Initiate 2020; Ongoing implementation through 2024	County-led action item. CPG Member, Town Supervisor	Under \$1,000	Ability to access resources during emergencies and eligibility for monetary aid.	Town Budget	Medium	No
7	Request code/ordinance review by Count as needed (2011 PI-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	No	No	Initiate 2020; Ongoing implementation through 2024	County-led action item. CPG Member, Town Supervisor	\$10,000	More useful Code for our residents.	Possible NYS grants	Low	No

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

¹³ 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.

¹⁴ 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.

¹⁵ Priority – See “Prioritization Methodology” on the next page.

¹⁶ 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.

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 ¹² ?	EHP ¹³ Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁴	Priority ¹⁵	Action Worksheet Provided? ¹⁶
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
					codes/ordinances as applicable. (prevention)									
8	Send CEO to County-Led Training (2011 PI-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)	No	No	Initiate 2020; Ongoing implementation through 2024	County-led action item. CPG Member, Town Supervisor	\$1,000	Allows CEO to be better prepared for emergencies	Possible grants/town budget	Low	No
9	Send Comprehensive Plan Update to County for Review by County Planning (2011 PI-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)	No	No	5 years or when Comprehensive Plan is next updated	County-led action item. CPG Member, Town Supervisor	\$50,000	Allows better regional consideration	NYS Department of State grant	Medium	No
10	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 PI-CL-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)	No	No	Initiate 2020; Ongoing implementation through 2024	County-led action item. CPG Member, Town Supervisor	Under \$500	Ensures most current and accurate information is known by the town.	Town budget	Medium	No
11	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 PI-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.	No	No	2019	Building Department	\$5,000	Will reflect new maps once received.	Federal/State grants	Medium	No
12	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 PI-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	No	No	When FEMA issues new maps	Building Department and Zoning	\$5,000	Will reflect new maps once received.	Federal/State grants	Medium	No
13	Mitigation of RLPs *NEW*	1	Flooding	Sand Lake has two NFIP Repetitive Loss Properties	The Town will support property owners who wish to undertake flood mitigation on private property.	No	TBD	5 Years	Town Supervisor and Floodplain Manager	High	High	FEMA PDM or HMGP	Medium	No

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	Update Floodplain Maps	Flooding	Yes	Yes	Flood prevention	\$0	Yes	Yes	Yes	Yes	Yes	No	Yes	High
2	Develop Dam Emergency Action Plan	Flooding	Yes	Yes	Mitigation of damage/human injury	\$1,000	Yes	Yes	Yes	Yes	Yes	No	Yes	High
3	Replace Orchard Lane Culvert	Flooding	No	No	Cost savings to replace new road	\$5,000	Yes	No	Yes	Yes	Yes	No	No	Medium
4	Investigate dredging the Wynantskill Creek (5-7 miles)	Flooding	No	No	Dredging may be able to assist in potential flood prevention	\$100,000	Yes	Yes	No. The Town will need assistance.	No	Yes	No	Yes	Medium, Dependent on obtaining flood maps to make determination
5	Reduce Tree Related Hazards (2011 SL-4)	Snow Storm, Ice Storm, Wind	No	No	Property Damage mitigation	\$50,000 annually	Yes	No	Yes	Yes	Yes	No	No	Medium
6	Participate in County-Led Hazard Mitigation Outreach (2011 PI-CL-1)	All hazards	No	No	Better knowledge to make decisions	\$1,000	Yes	No	Yes	Yes	No	No	No	Medium
7	Request code/ordinance review by County as needed (2011 PI-CL-2)	All hazards	No	No	Better knowledge to make decisions	\$10,000	Yes	No	Yes	Yes	No	No	No	Medium
8	Send CEO to County-Led Training (2011 PI-CL-3)	All hazards	No	No	Better knowledge to make decisions	\$1,000	Yes	No	Yes	Yes	No	No	No	Medium
9	Send Comprehensive Plan Update to County for Review by County Planning (2011 PI-CL-4)	All hazards	No	No	More regional considerations	\$50,000	Yes	No	Yes	Yes	No	No	No	Medium
10	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 PI-CL-5)	All hazards	No	No	Better knowledge to make decisions	\$500	Yes	No	Yes	Yes	No	No	No	Medium
11	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 PI-NFIP-1)	Flooding	No	Yes	Protection of residents and businesses	\$5,000	Yes	Yes	No	Yes	No	No	Yes	Medium
12	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 PI-NFIP-4)	Flooding	No	Yes	Protection of residents and businesses	\$5,000	Yes	Yes	No	Yes	No	No	Yes	Medium
13	Mitigation of RLPs *NEW*	Flooding	No	Yes	High	High	Equal	No	Private/Grants	Yes	No	No	No	Medium

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 Sand Lake are included on the following pages.

Section 8.17 - Jurisdictional Annex, Town of Sand Lake

NYS DHSES Action Worksheet			
Project Name:	Update Floodplain Maps		
Project Number:	01		
Risk / Vulnerability			
Hazard of Concern:	Inaccurate knowledge of floodplains in the Town of Sand Lake. (flooding)		
Description of the Problem:	The floodplain maps in the town have not been updated since 1980.		
Action or Project Intended for Implementation			
Description of the Solution:	The town needs to reach out to FEMA to learn what is involved in updating the maps. At that time, we will need to obtain the maps and determine any changes since 1980.		
Is this project related to a Critical Facility?	Yes * <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
* 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:	High	Estimated Benefits (losses avoided):	Mitigate potential flooding in the town and educate our public, especially those who may live/work in the floodplain.
Useful Life:	20+ years		
Estimated Cost:	None		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2019-2020
Estimated Time Required for Project Implementation:	Six months	Potential Funding Sources:	No funding needed.
Responsible Party: (Department/ Organization)	Building Department	Local Planning Mechanisms to be Used in Implementation, if any:	The Building and Planning Departments will be involved. If needed, the Planning Board can also participate.
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	No costs.	Not realistic solution.
	Rely on the maps of neighboring towns.	No costs.	Not realistic solution.
	Conduct own floodplain map analysis.	\$250,000	Not realistic solution. The Town does not have in-house expertise and no money for consultants.
	Meet with FEMA to express Town concerns regarding the need for new maps	\$0	Best alternative aligning with local capabilities
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 8.17 - Jurisdictional Annex, Town of Sand Lake

NYS DHSES Action Worksheet			
Project Name:	Develop Dam Emergency Action Plan		
Project Number:	02		
Risk / Vulnerability			
Hazard of Concern:	Loss of life and/or property associated with dam breach(es) and associated flooding.		
Description of the Problem:	Sand Lake has 5 dams, all of which are privately owned. At the present time, the town does not have the most current information on the dams regarding their maintenance and condition.		
Action or Project Intended for Implementation			
Description of the Solution:	A Dam EAP will help alleviate chaos during a potential crisis. It will also help the Town determine where gaps of knowledge may exist regarding dam ownership, responsibility, and dam condition.		
Is this project related to a Critical Facility?	Yes * <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
* 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:	High	Estimated Benefits (losses avoided):	Avoid loss of lives and property
Useful Life:	5 years		
Estimated Cost:	\$1,000		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	One year
Estimated Time Required for Project Implementation:	One year	Potential Funding Sources:	Town Budget. It is not anticipated this will cost a lot. Instead, it will be a high work effort to completed.
Responsible Party: (Department/ Organization)	Town Board	Local Planning Mechanisms to be Used in Implementation, if any:	We will draw on all town planning resources, along with all other town departments.
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Unacceptable
	Rely on Dam Owners to Complete	\$0	The Town would have no assurances the EAP would be adequate or accurate.
	Employ Consultants to Complete EAP	\$200,000	This is a very labor-intensive activity. Consultants would be hired that have no knowledge of the town.
	Use Town staff to Complete EAP	\$1,000	Best alternative aligning with local capabilities
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:			