

## 8.14 - Jurisdictional Annex, Town of Pittstown

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

### 8.14.1 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		Alternate Point of Contact			
Name: Verna Hansen Title: Town Supervisor Address: 97 Tomhannock Road, Valley Falls, NY 12185 Phone Number: 518-753-4222 E-mail Address: <a href="mailto:supervisor@townofpittstown.org">supervisor@townofpittstown.org</a>	Name: Paul Campbell Title: Highway Superintendent Address: Phone Number: 518-727-2736 E-mail Address: <a href="mailto:highway@townofpittstown.org">highway@townofpittstown.org</a>		Name: Don Bugbee Title: Code Enforcement Officer Address: Phone Number: 518-928-4982 E-mail Address: <a href="mailto:pittstownbi@townofpittstown.org">pittstownbi@townofpittstown.org</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	N/A					
Emergency Manager	N/A					
Floodplain Manager/Administrator	Don Bugbee		518-928-4982	12/10/2018	verbal	Y
Public Works Director / City Engineer	N/A					
Building Code Official	Don Bugbee	<a href="mailto:Pittstownbi@townofpittstown.org">Pittstownbi@townofpittstown.org</a>	518-928-4982	12/10/2018	verbal	Y
Fiscal/Budget Officer	Verna Hansen, Supervisor	<a href="mailto:Supervisor@townofpittstown.org">Supervisor@townofpittstown.org</a>	518-753-4222	Self	n/a	Y
Manager/Administrator	Verna Hansen, Supervisor	<a href="mailto:supervisor@townofpittstown.org">supervisor@townofpittstown.org</a>	518-753-4222	"	"	"
Elected Officials	Paul Campbell, Pittstown Highway	<a href="mailto:Highway@townofpittstown.org">Highway@townofpittstown.org</a>	518-727-2736	12/10/2018	verbal	Y
Other: Pittstown Fire Department	Jason Harris, Fire Chief	Station25car1@nycap.rr.com	518-225-2137	2/25/2019	verbal	Y
Significant Business: Country Acres Mobile Home Park	Matt McCloskey, Manager		518-334-1514	2/25/2019	verbal	Y
Local Hospital	N/A					
Major University	N/A					
Neighboring County(ies)	N/A					
Tribal Group/Nation	N/A					

### 8.14.2 JURISDICTION PROFILE

#### 8.14.2.1 Location and Land Area

The Town of Pittstown is located in north central Rensselaer County, in the eastern part of New York State. It shares border with Schaghticoke to the north; Brunswick and Grafton to the

south; Hoosick to the east; and Schaghticoke 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 Pittstown has a total area of 64.84 square miles (167.94 km<sup>2</sup>), of which 61.63 square miles (159.62 km<sup>2</sup>) is land and 3.22 square miles (8.33 km<sup>2</sup>) is water.

#### 8.14.2.2 Population

According to the 2010 U.S. Census Bureau's American Community Survey 5-Year Estimates, the population of the Town of Pittstown is estimated to be 5,735.

#### 8.14.2.3 Demographics

Of a total area of 64.84 square miles (2010 Census data), the land area is 61.74 square miles and population per square mile is 91.4 persons.

Of the total population, there are 99.5 males per 100 females (all ages). Twenty four percent of the population are persons under 18 years, and 12.6% 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 94, or 1.8%, of which 59.6% 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, 85.7% are high school graduates or higher, and 18.5% 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 2,131 total households and 2.69 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 \$79,698: the per capita income in past 12 months (2017) was \$34,018: and the percentage of persons in poverty was 6.3%. 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 12.5%, and percentage of people with a disability over age 65 years is 41.7%. The total percentage of persons (civilian, noninstitutionalized) without health insurance is 4.7%. 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.

#### 8.14.2.4 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 Town of Pittstown is one of the original towns in the county and was created in 1788 from a patent dated 1761.

#### 8.14.2.5 Governing Body Format

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

#### 8.14.2.6 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 Pittstown reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019.

The Town of Pittstown 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. Typical development tends to be active single family residential development in undeveloped woodland areas and farmland. There is no commercial development or

retirement housing. Due to the economy, very little residential development is currently occurring.

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 Pittstown enforces land use regulations and higher-level authority to protect new development from the effects of natural hazards.

### 8.14.3 HAZARD IDENTIFICATION

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

Profiled Hazards in the Town of Pittstown													
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>			
Pittstown, 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.

### 8.14.4 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.

NOAAs 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
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 Pittstown since 2011 include:

August 28, 2011 – Irene

The remnants of Hurricane Irene brought heavy to extreme rainfall throughout Rensselaer County.

September 4, 2011 – Thunderstorm Winds

Trees and wires were reported down in Pittstown due to strong thunderstorm winds.

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 29, 2013 -Flooding

Multiple roads were reported to be washed out in Pittstown due to flash flooding.

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. Tamarac Road was closed with water running over the road.

#### 8.14.5 NATIONAL FLOOD INSURANCE PROGRAM SUMMARY

The Town of Pittstown has participated in FEMA's National Flood Insurance program since February 1, 1988.




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

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<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.

<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: \_\_\_\_\_ Title: \_\_\_\_\_  
 Email and phone: \_\_\_\_\_



### 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@renscoc.com. Feel free to contact Anna Foley of AECOM if you have questions, at [anna.foley@aecom.com](mailto: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 <sup>1</sup>	Position or Title of Your Jurisdiction's Designated Floodplain Manager/Administrator (may also be called NFIP Coordinator)	Is this person is a Certified Floodplain Manager?	Is floodplain management an auxiliary function?	Is your community in good standing with the NFIP?		
11/09/2015	02/01/1988	Code enforcer	<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.):							
Brought to current supervisor's attention that new maps were issued in 2016 and that the town ordinance should have been updated within 6 months. Will take action now. Code enforcer has been certified to do inspections.							
Describe barriers to running an effective NFIP program in the community (if applicable):							
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?
unknown	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No * Class: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Describe any outstanding compliance issues (i.e., current violations):							



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

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

Provide an explanation of your local floodplain permitting process:

Applicant submits application to code enforcer following town of Pittstown LL#2 2015

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 implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to implement home improvement program 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<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 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
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, did you (or your predecessor at the time) actively participate 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
* If you answered "yes", that there have been changes to your local program since 2009, please describe:								
Adopted local law #2 2015 regarding flood damage protection as authorized by the NYS Const. Article IX sec 2 of the ECL Art 36								
Provide a description of your community assistance and monitoring activities:								
Community assistance and monitoring activities done thru the code enforcer office.								
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#NJ>  
 NFIP claims data by community is maintained at: <http://bsa.nfipstat.fema.gov/reports/1040.htm#34>  
 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.

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

#### 8.14.6 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 Pittstown.

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<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 Pittstown	\$737,726,000	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1

Rensselaer County	Population, Census 2010:	159,429
Town of Pittstown	Population, Census 2010:	5,735
Rensselaer County	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	30,429
Town of Pittstown	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	1,013

<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 six percent of land in the Town of Pittstown 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 (%)
Pittstown, Town of	41,256	2,516	6%

Improved Property. Approximately three percent of improved property in the Town of Pittstown 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 (%)
Pittstown, Town of	\$737,726,000	\$24,859,645	3%

Population. Approximately two percent of the population in the Town of Pittstown 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
Pittstown, Town of	5,735	92	2%

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 Pittstown.

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

**8.14.7 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 Pittstown, the hazard with the highest estimated average annual losses is flooding.

Summary of Annual Loss Estimates – Town of Pittstown <sup>7</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
Pittstown, Town of	\$737,726,000	\$31	\$432	\$1,911	\$237	\$10,487	\$2,656	\$745	\$0	\$18,240	\$2,603	\$0	\$2

<sup>7</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.**

## 8.14.8 HAZARD RANKINGS AND KEY RISK FINDINGS

Hazard rankings for the Town of Pittstown 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 highest priority hazard for the Town of Pittstown.

Hazard Rankings – Town of Pittstown					
Hazard	Future Probability	Potential Consequence	Relative Risk	Hazard Priority	Average Annualized Losses <sup>8</sup>
Extreme Temperatures (Coldwave/ Heat Wave)	Low	Low	Low	Low	\$31
Hurricane/ Tropical Storm	Low	High	Moderate	Moderate	\$432 Wind; \$1,911 Wind + Flood
Lightning	High	Low	Low	Low	\$237
Tornado	Low	High	High	High	\$10,487
Wind	High	Low	High	High	\$2,656
Winter Storm (Ice Storm/Snow Storm)	High	Moderate	Moderate	Moderate	\$745
Drought	Low	High	Low	Low	\$0
Flood	High	High	High	High	\$18,240
Earthquake	Low	High	Moderate	Moderate	\$2,603
Landslide	High	Low	Moderate	Moderate	\$0
Wildfire	Low	Low	Low	Low	\$2

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

- Sunkauissa Creek, which feeds into the Tomhannock Reservoir (a water source for the city of Troy), overflows causing flooding to residents of the Country Acres Mobile Home Park.
- At 517 Groveside Avenue, excessive rain like storm of July 2017 causes water to overflow culverts and flood farmers crops and storage unit. Creek flows thru farmer's property; floods cause water to overflow culverts and corn fields and storage barn. In July 2017, 3 to 5 acres of corn fields were flooded resulting in associated crop losses of all corn that was affected. (Based on the 2018 NYS Agriculture Overview from USDA at [https://www.nass.usda.gov/Quick\\_Stats/Ag\\_Overview/stateOverview.php?state=NEW%20YORK](https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20YORK), 159 bushels/acre; \$4.1/bushel; yields an estimated value lost during 2017 of roughly between \$1956 and \$3260. Flooding occurs at this location every year, though not always to the level of the 2017 event.

<sup>8</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.

- On Peter Hansen Lane, flooding and erosion of the roadway is an issue requiring a change in the design of the road, but the middle of this dirt road is exposed shale rock that cannot be worked on with a grader.
- North Pole Road is not wide enough in certain areas for adequate plowing in the winter and grading in the summer. This poses safety issues during snow storms and ice storms. The road needs to be widened. In addition, there is a drainage issue at this location where existing culvert does not convey water properly and needs to be mitigated with upgraded culverts and adding new culverts.
- The residents' knowledge of natural hazards and risks could be improved to foster mitigation and resiliency. 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.
- There is a need to review codes and ordinances with an eye toward how well natural hazards and hazard mitigation are addressed. Also, many things on the books are outdated. 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. Outdated ordinances can mean that a community may not be regulating to the latest codes and standards or hazard information, and that does not foster community resiliency.
- There can be a loss of institutional knowledge with staff changes in the Code Enforcement Officer position. 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.
- The Town needs to integrate its comprehensive plan with the mitigation plan. 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.
- Municipal staff could benefit from training or workshops on natural hazards and hazard mitigation planning. When municipal staff are armed with information on zoning and planning issues that sometimes arise regarding natural hazards and hazard mitigation, they may make better decisions that foster community resiliency.
- As a community participating in the NFIP, our Floodplain Manager must enforce our local floodplain management ordinance. To do so effectively, he/she must be very familiar with the FEMA-480 document. Certified Floodplain Managers receive their certification after passing an exam which tests their knowledge of FEMA-480. An unknowledgeable floodplain manager may not implement the ordinance or the FEMA requirements properly. In turn, lives/property can be put at risk or in harm's way and additionally, our community's eligibility to continue its participation in the NFIP could be jeopardized if we do not undertake floodplain management activities in accordance with NFIP requirements (as spelled out in FEMA-480).

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

### 8.14.9 OUTREACH TO THE PUBLIC AND OTHER STAKEHOLDERS

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

Outreach Activities			
Date of Activity	Type of Activity	Activity Details	Lead Department and/or Staff Title Who Undertook Activity
01/07/2019 and ongoing	Townofpittstown.org	Posting on town website advising public of plan update and inviting interested parties to contact supervisor. Information is maintained on an ongoing basis.	Supervisor
03/30/2019	Town spring-newsletter	Article in town newsletter sent out first week of April with info that is on the town website	Supervisor
Second Monday of each month	Regular meetings of the town board – open to and attended by the public	Town Supervisor referenced town's participation in the plan update at each meeting	Supervisor

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

### 8.14.10 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.

#### 8.14.10.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Pittstown. 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 Dept	2015 International Code& updates Adopted 07/2016

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)
b. Zoning ordinance	Y	Zoning Board	Zoning Schedule and Land Use Regulations Adopted 03/11/2019
c. Subdivision ordinance or regulations	Y	Planning Board	LL# 3 1994
d. Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Flood Plan management	LL#2 2015
e. Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N		
f. Site plan review requirements	Y	Planning Board	LL# 3 1994
g. General, comprehensive or master plan	Y	Town Board	Comprehensive Plan 03/2013
h. A capital improvements plan	N		
i. An economic development plan	N		
j. An emergency response plan	Y	Town Board	Town of Pittstown Comprehensive Emergency Plan Adopted 11/14/2016
k. A post-disaster recovery plan	N		
l. A post-disaster recovery ordinance	N		
m. Real estate disclosure requirements	N		
n. Other	N		

### 8.14.10.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Pittstown. 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	N	Hired as needed
b. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	N	Hired as needed
c. Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N	
d. Floodplain manager	Y*	Building Dept/Code Enforcer



Administrative and Technical Capability		
Staff / Personnel Resources	Available (Y or N)	Department / Agency / Position
e. Surveyors	N	
f. Staff with education or expertise to assess the community's vulnerability to hazards	N	Highway Superintendent
g. Personnel skilled in GIS and/or HAZUS	N	
h. Scientists familiar with the hazards of the community	N	
i. Emergency manager	Y	Chief Executive
j. Grant writers	N	
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.		

### 8.14.10.3 Fiscal Capability

The table below summarizes financial resources available to the Town of Pittstown. 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)	No
b. Capital improvements project funding	Yes
c. Authority to levy taxes for specific purposes	Yes
d. Fees for water, sewer, gas, or electric service	No
e. Impact fees for homebuyers or developers for new developments/homes	No
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	Do not know
i. Withhold spending in hazard-prone areas	Do not know
j. State mitigation grant programs	Do not know
k. Other	

### 8.14.10.4 Overall Capabilities

The Town of Pittstown'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	Low
How these capabilities can be expanded and/or improved to reduce risk:				
The main item needed for a town the size of Pittstown to expand or improve to reduce risk is funding. When the storm of July 2017 devastated many areas of the town, FEMA came three times and said the town would qualify for funding for improvements to roads and upgrades but then the hurricane struck Puerto Rico and no funding was available for upstate NY.				

### 8.14.10.5 Community Classifications

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

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 Pittstown'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/>

#### 8.14.11 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.

#### 8.14.12 PLAN FOR EVACUATION NEEDS AND SHELTERING

The Town of Pittstown has an emergency response plan<sup>9</sup>. It does not have a post-disaster recovery plan or a post-disaster recovery ordinance<sup>10</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 Pittstown 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>9</sup> Source: Local Capability Assessment

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

### 8.14.13 FUTURE NEEDS - RISK/VULNERABILITY

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

### 8.14.14 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 Pittstown 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 Pittstown undertook the following plan integration mechanisms over the last planning cycle:

- The master, general or comprehensive was updated since 2011.
- 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. Code enforcer is required to stay up to date with all state regulations and enforcement.
- Community currently has a local zoning ordinance. ]

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

- 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.
- Add hazard vulnerability to subdivision and site plan review criteria.
- Require the Department of Public Works to inspect and clean debris from streams and ditches more frequently.
- 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.
- Protect life and property in high hazard areas by limiting densities of new development.
- 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.)

#### 8.14.15 MITIGATION STRATEGY

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

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

##### 8.14.15.1 Progress on 2011 HMP Initiatives

The following table was completed by the Town of Pittstown 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.

No changes in priorities have been identified by the Town since the initial plan.

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	
PI-1	Culvert upgrade/drainage improvement to Brundige Road, Herrington Road, North Pole, Sproat Road, Village of Valley Falls, Village of Johnsonville Replacing existing culverts, adding additional culverts, road widening	High	Flooding, land erosion, road washouts	Highway			x		All except North Pole have been addressed. North Pole is the only ongoing in the list as town needs to acquire easements to widen the road and do ditching and culvert work.	x		Project is being carried forward for North Pole as the other roads and their issues have been addressed.
PI-2	Adopt a steep slope ordinance to regulate development	High	Landslide, erosion	Town Board				x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan		x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan
PI-3	Implement hillside & steep slope development regulation for higher risk areas	High	Erosion, landslide	Town Board				x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan		x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan
PI-4	Ice and windstorm –resistant trees and landscaping practices to reduce tree related hazards	Medium	Power outages, loss of sunlight on roads	Town Board				x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan		x	Lack of political support and Board members not willing to take up the update of the Comprehensive Plan
PI-5	Implement public awareness and education for all possible hazards that apply to Pittstown residents	High	Flooding, ice storm damage, landslides, lightning strikes, enable public to prepare and respond and recover from disasters	Town Board			x		One example is regular Town meetings regarding road widening and tree removal and associated drainage issues being addressed; these meetings are open to and attended by members of the public.	x		Has not changed from 2011 plan.
PI-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	Town newsletter and town website	x		County is carrying forward this County-led activity with no changes; our municipality will it 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	
PI-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		A 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 it carry it forward as well.
PI-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		Locally administered on an ongoing basis; our community <u>did not</u> 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 it carry it forward as well.
PI-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		Pittstown has a comprehensive plan (master plan). It has not been revised to incorporate natural disaster mitigation.	x		County is carrying forward this County-led activity with no changes; our municipality will it carry it forward as well.
PI-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 it carry it forward as well.
PI-NFIP-1	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	High	Flooding	Town Board			x		Ordinance was updated in 2015. FEMA issued new maps in 2016; ordinance should be reevaluated.	x		Ongoing type of activity; will be carried forward with no changes.
PI-NFIP-4	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	High	Flooding	Town Board			x		FEMA issued new maps in 2016; ordinance should be reevaluated.	x		Ongoing type of activity; will be carried forward with no changes.
PI-NFIP-5	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	Low	Flooding	Code Enforcer				x	Not agency required; municipality opted not to require CFM certification.	x		Will require of the new floodplain administrator who just started in May 2019
PI-NFIP-6	Join the Community Rating System (CRS)	Low	Flooding	Town Board				x	Municipality opted not to enter CRS.		x	Municipality reconsidered in 2019 and opted not to initiate the process during the next planning cycle.

8.14.15.2 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 following table summarizes past mitigation accomplishments for the Town of Pittstown, from the time the 2011 HMP was approved through its first update in 2019.

Past Mitigation Accomplishments					
Project Number	Project Name	Hazard(s) Addressed	Brief Summary of the Original Problem and the Solution (Project)	Evaluation of Success	
1	Holbritter Road	Culvert and road washed away	Road closed due to washout from July 2017 torrential rain. A 4-foot culvert washed away and was replaced with a 6-foot culvert and the road was rebuilt.	Cost	\$15,000.00
				Level of Protection	Estimated to be 25 years
				Damages Avoided; Evidence of Success	Road re opened
2	Croll Road	Road washed away	Road closed due to washout from storm of July 2017. Pavement was undermined, washed away and filled in ditches. Had to bring in rip rap, cobble and paving.	Cost	\$20,000
				Level of Protection	Estimated to be 15 years
				Damages Avoided; Evidence of Success	Road reopened
3	Peter Hansen Road	Road washed away	Dead end road was closed due to washout from July 2017 storm. Cobble, gravel and grading to reestablish road.	Cost	\$13,000
				Level of Protection	Estimated to be 15 years
				Damages Avoided; Evidence of Success	Road reopened
4	Piser Hill Road	Road wash out	Section of road closed due to July 2017 storm. Ditching and gravel brought in to rebuild road.	Cost	\$13,000
				Level of Protection	Estimated to be 25 years
				Damages Avoided; Evidence of Success	Road reopened



### 8.14.15.3 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 Pittstown 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>11</sup> ?	EHP <sup>12</sup> Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources <sup>13</sup>	Priority <sup>14</sup>	Action Worksheet Provided? <sup>15</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	NEW - Country Acres Mobile Home Park	3	Flooding	Flooding in residents' mobile homes at park. Over the years, the creek has continued to fill with sediment. Storm of July 2017 created the worst ongoing flooding issues in the mobile home park, Swift water rescue had to be used to get residents to safety. Much debris (including propane tanks) flowed to Tomhannock Reservoir a water source for the City of Troy	Creek needs to be cleaned out and possibly raising the creek banks in the process	No	No	2020	Highway supt. County Engineer DEC	Unknown but less than \$100,000	Protect Tomhannock Reservoir, Eliminating or reducing damage to homes in the park	FEMA PDM, FEMA HMGP	High	Yes
2	NEW- 517 Groveside Road	3	Flooding	Creek flows thru farmer's property: floods cause water to overflow culverts and corn fields and storage barn. In July 2017, 3 to 5 acres of corn fields were flooded resulting in associated crop losses of all corn that was affected. (based on the 2018 NYS Agriculture Overview from USDA at <a href="https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20YORK">https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20YORK</a> , 159 bushels/acre; \$4.1/bushel; yields an estimated value lost during 2017 of roughly between \$1956 and \$3260. Flooding occurs at this location every year, though not always to the level of the 2017 event.	Creek needs to be cleaned out and culvert work	No	No	2020	Highway supt. DEC	Unknown less than \$20,000 (for planning purposes using \$20,000 as a max and with an estimated 50-year useful life on culverts gives an annual cost on the order of about \$400 per year)	Farmer will not have significant loss of crops: whether in the field or in storage unit. Detailed info is not available at the time of the plan update to prepare a detailed BCA, and would be needed if a grant application was to be submitted; however, for planning purposes at this time, estimating about 1 acre of losses on an annual basis = 1 acre * 159 bushels/acre * \$4.1/bushel = \$652 in losses per year that might be eliminated by creek and culvert improvements to stop frequent flooding at this site. This doesn't consider any damage reduction to the barn or its contents.	FEMA PDM, FEMA HMGP	High	Yes
3	NEW - Peter Hansen Lane	3	Flooding, road erosion	Middle of dirt road is exposed shale rock that cannot be worked on with grader	Road needs to be altered with jack hammer to remove shale, change design of road	No	No	5 years	Town highway dept. supt.	Unknown but less than \$20,000	Improve drainage and culverts should lessen road closure on this dead-end road improving safety	Town staff and funding resources in local budget	Medium	No
4	NEW - North Pole Rd Widening	3	Winter Storms (Snow Storms, Ice Storms)	Road is not wide enough in certain areas for adequate plowing in the winter and grading in the summer. Traffic Safety issues.	Widening the road by acquiring thru easements or eminent domain	No	No	5 years	Town high dept. supt.	Unknown depending on whether eminent domain used to get extra property but less than \$20,000	Traffic Safety and savings on road maintenance	Town staff and funding resources in local budget	Medium	No

<sup>11</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>12</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>13</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>14</sup> Priority – See “Prioritization Methodology” on the next page.

<sup>15</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.

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>11</sup> ?	EHP <sup>12</sup> Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources <sup>13</sup>	Priority <sup>14</sup>	Action Worksheet Provided? <sup>15</sup>
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
5	North Pole Road Culvert Upgrade / Drainage Improvement (2011 PI-1)	3	Flooding, land erosion, road washouts	Road is not wide enough in certain areas for adequate plowing in the winter and grading in the summer. Traffic Safety issues.	Culvert upgrade//drainage improvement to North Pole culverts, adding additional culverts, road widening	No	No	5 years	Highway	Unknown but less than \$20,000	Traffic Safety and savings on road maintenance	Town staff and funding resources in local budge	Medium	No
6	Hazard Outreach (2011 PI-5)	1	Flooding, ice storm damage, landslides, lightning strikes, enable public to prepare and respond and recover from disasters	The residents' knowledge of hazards and risks could be improved.	Implement public awareness and education for all possible hazards that apply to Pittstown residents	No	No	5 years	Town Board	Unknown	Decrease hazards	Local	High	No
7	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	5 years	County-led action item. CPG Member, Town Supervisor	Unknown	Increase public awareness	Local	High	No

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>11</sup> ?	EHP <sup>12</sup> Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources <sup>13</sup>	Priority <sup>14</sup>	Action Worksheet Provided? <sup>15</sup>
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
8	Request code/ordinance review by County 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 codes/ordinances as applicable. (prevention)	No	No	5 years	County-led action item. CPG Member, Town Supervisor	None	Safer community	Local	Medium	No
9	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	5 years	County-led action item. CPG Member, Town Supervisor	None	Continued education will benefit the town residents	Local	Medium	No
10	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	County-led action item. CPG Member, Town Supervisor	None	Keep town looking to the future	Local	High	No
11	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	ongoing	County-led action item. CPG Member, Town Supervisor	None	Keep zoning and planning boards abreast of changes	Local	Low	No
12	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	ongoing	Town Board	None	Compliance may lead to additional funding to resolve issues	Local	High	No
13	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	ongoing	Town Board	None	Protection for the town and residents	Local	High	No
14	Floodplain Manager CFM Certification (2011 PI-NFIP-5)	2	Flooding	As a community participating in the NFIP, our Floodplain Manager must enforce our local floodplain management ordinance. To do so effectively, he/she must be very familiar with the FEMA-480 document. Certified Floodplain Managers receive their certification after passing an exam which tests their knowledge of FEMA-	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	No	No	2 years	Code Enforcer	Unknown less than \$100	Protection for the residents and cost saving to them also	Local	Low	No

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>11</sup> ?	EHP <sup>12</sup> Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources <sup>13</sup>	Priority <sup>14</sup>	Action Worksheet Provided? <sup>15</sup>
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
				480. An unknowledgeable floodplain manager may not implement the ordinance or the FEMA requirements properly. In turn, lives/property can be put at risk or in harm's way and additionally, our community's eligibility to continue its participation in the NFIP could be jeopardized if we do not undertake floodplain management activities in accordance with NFIP requirements (as spelled out in FEMA-480).										

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	NEW - Country Acres Mobile Home Park	Flooding	Yes	Yes	High- (1). Stop flooding that flows into the Tomhannock Reservoir, a drinking water supply source; and (2). Stop residential flooding in park	Unknown at this time less than \$100,000	Exceed	No	No	No	No	No	No	High
2	NEW - 517 Groveside Road	Flooding	No	No	High - Reduce crop loss on the order of around \$600/year	Unknown at this time less than \$20,000 (or on the order of about \$400/year)	Exceed	No	No	No	No	No	No	High
3	NEW - Peter Hansen Lane	Flooding	No	No	Medium - Safety issues related to egress for residents	Unknown less than \$15000.00	Equal	No	No	No	No	No	No	Medium
4	NEW - North Pole Rd Widening	Winter Storms (Snow Storms, Ice Storms)	No	No	Medium- Safety issues related to traffic patterns	Unknown depending on how acquisition of property is done, less than \$20,000	Equal	No	Yes	Yes	No	No	No	Medium
5	North Pole Road Culvert Upgrade / Drainage Improvement (2011 PI-1)	Flooding, land erosion, road washouts	No	No	Medium - safety issues related to traffic patterns	Unknown less than \$20,000	Equal	No	Yes	Yes	No	No	No	Medium
6	Hazard Outreach (2011 PI-5)	Flooding, ice storm damage, landslides, lightning strikes, enable public to prepare and respond and recover from disasters	No	No	Medium	Unknown less than \$200	Equal	No	Yes	Yes	No	No	No	Medium
7	Participate in County-Led Hazard Mitigation Outreach (2011 PI-CL-1)	All hazards	No	No	Medium- Continuity of knowledge	Unknown	Equal	No	Yes	Yes	No	No	No	Medium

8	Request code/ordinance review by County as needed (2011 PI-CL-2)	All hazards	No	No	Medium-keep up to date	Unknown	Equal	No	Yes	Yes	No	No	No	Medium
9	Send CEO to County-Led Training (2011 PI-CL-3)	All hazards	No	No	Medium-continuity of information	Unknown	Equal	No	Yes	Yes	No	No	No	Medium
10	Send Comprehensive Plan Update to County for Review by County Planning (2011 PI-CL-4)	All hazards	No	No	Medium-keep character of the town per residents wishes	Unknown	Equal	No	Yes	No	No	No	No	Medium
11	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 PI-CL-5)	All hazards	No	No	Medium keep up to date	Unknown	Equal	No	Yes	Yes	No	No	No	Medium
12	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 PI-NFIP-1)	Flooding	No	No	High -keep up to date	Unknown	Equal	No	Yes	Yes	No	No	No	High
13	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 PI-NFIP-4)	Flooding	No	No	High-keep up to date	Unknown	Equal	No	Yes	Yes	No	No	No	High
14	Floodplain Manager CFM Certification (2011 PI-NFIP-5)	Flooding	no	no	High-keep up to date	Unknown less than\$100	Exceed	No	Yes	Yes	No	No	No	High

### 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 Pittstown are included on the following pages.



Section 8.14 - Jurisdictional Annex, Town of Pittstown

NYS DHSES Action Worksheet			
Project Name:	Country Acres Mobile Home Park		
Project Number:	1		
Risk / Vulnerability			
Hazard of Concern:	Flooding of Sunkauissa Creek		
Description of the Problem:	Creek, which feeds into the Tomhannock Reservoir which is water source for the city of Troy, overflows causing flooding to mobile home residents.		
Action or Project Intended for Implementation			
Description of the Solution:	Creek needs to be cleaned out; Possibly raising the creek banks in the process		
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:	100-year flood	Estimated Benefits (losses avoided):	Losses avoided to mobile home owners and less pollution to Tomhannock Reservoir
Useful Life:	50 years		
Estimated Cost:	Unknown less than \$100,000		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2020
Estimated Time Required for Project Implementation:	Unknown	Potential Funding Sources:	County/State, FEMA HMGP, FEMA PDM
Responsible Party: (Department/ Organization)	Highway	Local Planning Mechanisms to be Used in Implementation, if any:	County/state/town highway
Three Alternatives Considered (including No Action)			
Alternatives:		Estimated Cost	Evaluation
	No action	0	Not viable; residents are still in harm's way
	Buy out the park	Very High	Private owner not interested
	Increase conveyance of the creek	Unknown less than \$100,000	Proposed alternative; protects residents despite landowner's interest in not abandoning site
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 8.14 - Jurisdictional Annex, Town of Pittstown

NYS DHSES Action Worksheet			
Project Name:	517 Groveside		
Project Number:	2		
Risk / Vulnerability			
Hazard of Concern:	Creek flooding		
Description of the Problem:	Excessive rain like storm of July 2017 causes water to overflow culverts and flood farmers crops and storage unit. Creek flows thru farmer's property: floods cause water to overflow culverts and corn fields and storage barn. In July 2017, 3 to 5 acres of corn fields were flooded resulting in associated crop losses of all corn that was affected. (Based on the 2018 NYS Agriculture Overview from USDA at <a href="https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20YORK">https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20YORK</a> , 159 bushels/acre; \$4.1/bushel; yields an estimated value lost during 2017 of roughly between \$1956 and \$3260. Flooding occurs at this location every year, though not always to the level of the 2017 event.		
Action or Project Intended for Implementation			
Description of the Solution:	Cleaning out creek and culvert upgrades to improve flow when excessive rains occur		
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:	100-year flood	Estimated Benefits (losses avoided):	Avoiding crop loss and damage to barn. Farmer will not have significant loss of crops: whether in the field or in storage unit. Detailed info is not available at the time of the plan update to prepare a detailed BCA, and would be needed if a grant application was to be submitted; however, for planning purposes at this time, estimating about 1 acre of losses on an annual basis = 1acre * 159 bushels/acre * \$4.1/bushel = \$652 in losses per year that might be eliminated by creek and culvert improvements to stop frequent flooding at this site. This doesn't take into account any damage reduction to the barn or its contents.
Useful Life:	50 years		
Estimated Cost:	Less than \$20,000 (based on a 50-year useful life this is about \$400 per year in costs)		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2020
Estimated Time Required for Project Implementation:	Unknown	Potential Funding Sources:	Local staff resources and local budget, FEMA HMGP, FEMA PDM
Responsible Party: (Department/ Organization)	Highway	Local Planning Mechanisms to be Used in Implementation, if any:	Town highway with creek flow near Quaker Street
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Not viable; farmer still incurs crop losses and damage to the barn
	Buy out the farm	Very high - in the hundreds of thousands	Too high and pursuing an acquisition of the site which is the farmer's livelihood is not in anyone's interest.
	Increase creek conveyance	Less than \$20,000	Viable economically and allows the land to still be farmed which is in everyone's best interest.
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:			