

8.20 - Jurisdictional Annex, Town of Schodack

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

8.20.1 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: Kenneth Holmes Title: Superintendent of Highways Address: 3776 US Route 20, Nassau, NY 12123 Phone Number: 518-766-4000 E-mail Address: ken.holmes@schodack.org				Name: Nadine Fuda Title: Director of Planning and Zoning Address: 256 Schuurman Road, Castleton, NY 12033 Phone Number: 518-477-7938 E-mail Address: Nadine.fuda@schodack.org		
Jurisdictional Assessment Team Members						
Local Jurisdiction Role/Position	Name	Email	Phone	Date of Invitation	Method of Invitation	Agreed to participate?
Land Use/Community Planner	Nadine Fuda	nadine.fuda@schodack.org	518-477-7938	self - involved since onset in Fall 2018	town board res.	Y
Emergency Manager	Joe Belardo	jbelardo@schodack.org	518-477-7973	2/1/2019	email	Y
Floodplain Manager/Administrator	Gary Ziegler	gary@schodack.org	518-477-7940	2/1/2019	email	Y
Public Works Director / City Engineer	Ken Holmes	ken.holmes@schodack.org	518-766-4000	self - involved since onset in Fall 2018	town board res.	Y
Building Code Official	Joe Tremblay	joe@schodack.org	518-477-7940	2/1/2019	email	Y
Fiscal/Budget Officer	Paul Harter	paul.harter@schodack.org	518-477-7919	2/1/2019	email	Y
Manager/Administrator	David Harris,	David.Harris@schodack.org	518-477-7918	on set	letter	Y
Elected Officials	Davis Harris, Supervisor	David.Harris@schodack.org	518-477-7918	on set	by letter	Y
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					

Note: The Town's new Emergency Manager is John Hourigan. Mr. Hourigan can be reached at: Jhourigan@schodackPD.com.

8.20.2 JURISDICTION PROFILE

8.20.2.1 Location and Land Area

The Town of Schodack is located in southwest Rensselaer County, in the eastern part of New York State. It shares a border with East Greenbush and Sand Lake to the north; Columbia

County to the south; the Town of Nassau and Village of Nassau to the east; and Albany County to the west.

According to the 2010 U.S. Census Bureau, 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 Schodack has a total area of 63.60 square miles (164.73 km²), of which 61.93 square miles (160.39 km²) is land and 1.68 square miles (4.34 km²) is water.

8.20.2.2 Population

According to the 2010 U.S. Census Bureau's American Community Survey 5-Year Estimates, the population of the Town of Schodack is estimated to be 12,794 persons.

8.20.2.3 Demographics

Of a total area of 63.66 square miles (2010 Census data), the land area is 62.23 square miles and population per square mile is 201.5 persons.

Of the total population, there are 97.2 males per 100 females (all ages). Persons under 18 years of age account for 22.6% of the population, and 14.7% 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 376, or 3.0%, of which 23.1% 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, 88.4% are high school graduates or higher, and 27.2% 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 5,062 total households and 2.50 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 145 or 1.1 % overall, with 82 (0.6%) institutionalized and 63 (0.5%) 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 \$79,740; the per capita income in past 12 months (2017) was \$40,457; and the percentage of persons in poverty was 3.6%. 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 11.6%, and percentage of people with a disability over age 65 years is 27.5%. The total percentage of persons (civilian, noninstitutionalized) without health insurance is 5.8%. 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.

8.20.2.4 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 Schodack had been the land of the Mohican Indians and from them Schodack got its name. The first Dutch settlement in what is now the Town of Schodack was in 1630 by tenants of the Patroon System. The town was officially formed on March 17, 1795 when the state legislature made the final division of the Towns of the patroonship, Rensselaerswyck. Schodack Landing, a hamlet on the Hudson River, became a major port center encouraging agricultural development and expansion.

8.20.2.5 Governing Body Format

The governing body of the municipality consists of a Town Board of five members, a Supervisory and four Councilpersons, elected at large. Its presiding officer is the Supervisor, who also directs operations of the Police, Highway, Building and Tax 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.

8.20.2.6 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 Schodack reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019.

Development trends in the Town of Schodack in recent years have been characterized by the more typical single family residential development in the town's Residential Agricultural (RA) Zone; as well as commercial development along major transportation routes in the Town's Highway Commercial (HC) Zone. A major commercial development will be taking place in the municipality with recently approved plans for a one million square foot Amazon building. Work is expected to commence in 2019.

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
Amazon	Commercial	1	US Rt. 9	200.-5-1.3	none	Approved construction in 2019

In order to protect new development from the effects of natural hazards, the Town of Schodack Planning Board Engineer reviews all new development in subdivisions within the town Local ordinances. The Town of Schodack enforces regulations including but not limited to: erosion and sedimentation control 219 -116, Chapter 188, 118 Flood Damage Prevention.

8.20.3 HAZARD IDENTIFICATION

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

Profiled Hazards in the Town of Schodack													
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			
Schodack, 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.

8.20.4 NOTABLE HAZARD EVENT OCCURRENCES SINCE 2011

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

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

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

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

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

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

August 28, 2011 – Irene

The remnants of Hurricane Irene brought heavy to extreme rainfall throughout Rensselaer County. Portions of Route 20 were reported closed due to flooding, including at Route 9 in the Town of Schodack.

October 29-30, 2012 – Sandy

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

September 12, 2013 – Thunderstorms

Showers and thunderstorms brought flooding and windy conditions to the area. Flash flooding occurred on Route 9 in South Schodack as a result of heavy rainfall.

July 19, 2015 – Thunderstorms

Trees were reported down in the Town of Schodack as a result of thunderstorm winds.

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

Numerous strong to severe thunderstorms occurred across Rensselaer County. Thunderstorm winds caused damages throughout the county, downing trees and power lines, and heavy rains caused flooding in many areas of the county. In Schodack, four people suffered minor injuries after a firework display tent collapsed at the Pilot truck stop on Route 9 in Schodack due to severe thunderstorm winds.



Personnel respond in Schodack after a tent collapse due to a storm on June 30, 2017 (Martin Miller / Special to the Times Union)

8.20.5 NATIONAL FLOOD INSURANCE PROGRAM SUMMARY

The Town of Schodack has participated in FEMA's National Flood Insurance program (NFIP) since 1987.

- Total number of policies¹: 29
- Insurance in force²: \$6,314,800
- Total number of losses: 8
- Total claims paid: \$65,478
- Repetitive Loss Properties: 0
- Severe Repetitive Loss Properties: 0

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

Name: Gary Ziegler Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator

Community: Town of Schodack Email and Phone: Gary@schodack.org



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@renco.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?		
8-27-87/ 12-14-89	1987	Gary Ziegler Administrator	<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.):							
Permit Review, site plan review, building insp. , Engineering, and our MS-4 Program							
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?
2017	<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):							
The Town of Schodack promotes the Public Health, Safety and welfare as well to reduce the loss of Public and Private property we do this through or site plan review and building permit review flood plan checks and our MS-4 Program.							

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

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: <u>Gary Ziegler</u> Title: <u>Floodplain Manager/Floodplain Administrator/NFIP Coordinator</u>								
Representing: <u>Town of Schodack</u> Email and Phone: <u>gary@schodack.org</u>								
								
Provide an explanation of your local floodplain permitting process: We have a Floodplain Development Permit Application with the Building Dept.								
Does your community intend to continue floodplain identification and mapping services including any local requests for map updates?	Does your community intend to initiate/continue the buyouts of repetitive loss properties?	Does your community intend to commit staff or resources to improve local mapping or code administration in the future?	Does your community intend to provide local outreach to promote the sale of flood insurance?	Does your community intend to participate in RiskMAP meetings and planning initiatives?	Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to continue to implement home improvement programs designed to minimize basement flooding?	Does your community intend to continue to implement roadway improvements to reduce damage from future flooding events?	Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority?
<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	<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 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			
* If you answered "yes", that there have been changes to your local program since 2011, please describe:								
We are working on the a zoning code update that will go to the Town Board in 2019								
Provide a description of your community assistance and monitoring activities:								
Our community has a strong MS-4 program to oversee activities as well as our building permit review and flood plan checks								
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#NJT 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		

8.20.6 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 Schodack.

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 Schodack	\$2,486,786,000	4	1	1	0	3	2	0	0	0	0	0	0	0	1	0	4	1	7
Rensselaer County	Population, Census 2010:	159,429																	
Town of Schodack	Population, Census 2010:	12,794																	
Rensselaer County	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	30,429																	
Town of Schodack	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	2,501																	

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 nine percent of land in the Town of Schodack 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 (%)
Schodack, Town of	40,217	3,433	9%

Improved Property. Approximately two percent of improved property in the Town of Schodack 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 (%)
Schodack, Town of	\$2,486,786,000	\$54,039,912	2%

Population. Approximately two percent of the population of the Town of Schodack 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
Schodack, Town of	12,794	230	2%

Critical Facilities. The following 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 Schodack.

Critical Facilities in the Floodplain			
Municipality	Type of Facility	Name of Facility	Flood Zone ⁷
Schodack, Town of	Wastewater Facility	Castleton-On-Hudson	A/AE/AO

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

Historic and Cultural Resources in the Floodplain				
Municipality	Historic Structure/Landmark/District		Location/Address	Flood Zone ⁸
Schodack, Town of	Albany District	Avenue Historic	Albany Avenue	A/AE/AO

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

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

Historic and Cultural Resources in the Floodplain			
Municipality	Historic Structure/Landmark/District	Location/Address	Flood Zone ⁸
Schodack, Town of	Muitzes Kill Historic District	An irregular pattern on both sides of Schodack Landing Rd.	A/AE/AO
Schodack, Town of	Schodack Landing Historic District	NY 9J	A/AE/AO

8.20.7 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 Schodack, the hazard with the highest estimated average annual losses is flooding.

Summary of Annual Loss Estimates – Town of Schodack⁹

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
Schodack, Town of	\$2,486,786,000	\$104	\$1,872	\$6,443	\$800	\$35,351	\$8,954	\$2,510	\$0	\$421,290	\$6,715	\$0	\$7

⁹ * **It is important to note that this table reflects estimates of average annualized damages. For any hazard, individual event damages could be substantially higher.**

8.20.8 HAZARD RANKINGS AND KEY RISK FINDINGS

Hazard rankings for the Town of Schodack 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, by far, the highest priority hazard for the Town of Schodack.

Hazard Rankings – Town of Schodack					
Hazard	Future Probability	Potential Consequence	Relative Risk	Hazard Priority	Average Annualized Losses ¹⁰
Extreme Temperatures (Coldwave/ Heat Wave)	Low	Low	Low	Low	\$104
Hurricane/ Tropical Storm	Low	High	Moderate	Moderate	\$1,872 Wind; \$6,443 Wind + Flood
Lightning	High	Low	Low	Low	\$800
Tornado	Low	High	High	High	\$35,351
Wind	High	Low	High	High	\$8,954
Winter Storm (Ice Storm/Snow Storm)	High	Moderate	Moderate	Moderate	\$2,510
Drought	Low	High	Low	Low	\$0
Flood	High	High	High	High	\$421,290
Earthquake	Low	High	Moderate	Moderate	\$6,715
Landslide	High	Low	Moderate	Moderate	\$0
Wildfire	Low	Low	Low	Low	\$7

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

- Clove Road Flooding - Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. There is a nearby home on Jarman Way (on the upstream side of the bridge) that gets flooded, but it is unclear whether the proposed project at the bridge would reduce flooding of the home. Repair costs of \$3,000 to \$5,000 are incurred every eight to ten years, not including functional downtime or repairs needed at the residence.
- Clove Road Sloughing - Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. Repair costs of about \$10,000 are incurred every 8 to 10 years. Road sloughs over time after repairs

¹⁰ 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.

- Western Road Sloughing - Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. Repair costs of about \$10,000 are incurred every 8 to 10 years. Road sloughs over time after repairs.
- 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.
- 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.
- 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.
- 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.
- Floodplain manager would benefit from the training and certification regarding FEMA-480.

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

8.20.9 OUTREACH TO THE PUBLIC AND OTHER STAKEHOLDERS

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

Outreach Activities			
Date of Activity	Type of Activity	Activity Details	Lead Department and/or Staff Title Who Undertook Activity
[1/7/19]	[Hand out info.]	[Hand out info at Planning meeting]	[Nadine Fuda Planning Director]
[2/11/19]	[Hand out]	[Hand out information at ZBA meeting]	[Nadine Fuda Planning Director]
[2/14/19]	[Hand out]	[Hand out info at Town Board meeting]	[David Harris Supervisor]

The Town of Schodack received one comment to date as a result of its outreach activities, as shown in the Comments Log below.

Comments Log									
#	Comment	Comment Submitted By	Comment Submitted To	Comment Submitted on Date	How was comment submitted?	Disposition (Concur; non-concur; will evaluate)	Response/ Action Proposed	Responsible Party	Action taken
1	Question: How much is this costing the town	Resident	Planning meeting	01/07/19	In person	N/A	Question was answered at the meeting - there is no cost to the town to participate in the County - led project	N/A-no further action needed	N/A

8.20.10 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.

8.20.10.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Schodack. 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	Chapter - 90
b. Zoning ordinance	Y	Zoning Code 219	Zoning Code 219
c. Subdivision ordinance or regulations	Y	Subdivision Code 188	Subdivision Code 188
d. Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Floodplain Chapter 118 Stormwater 219-116	Floodplain Chapter 118 Stormwater Management 219-116

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)
e. Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N		
f. Site plan review requirements	Y	PB 219-78	Planning Board 219-78
g. General, comprehensive or master plan	Y	Yes, Comprehensive plan	Comprehensive Plan Under Review by TR
h. A capital improvements plan	N		
i. An economic development plan	Y	Town Center Plan	Zoning code update
j. An emergency response plan	Y	Town and County	Town and County
k. A post-disaster recovery plan	Y	Town and County	Town and County
l. A post-disaster recovery ordinance	N		
m. Real estate disclosure requirements	N		
n. Other			

8.20.10.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Schodack. 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 Department with Direction
b. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Planning Engineer
c. Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	Planning Engineer
d. Floodplain manager	Y*	Building Department, Floodplain Manager
e. Surveyors	N	Not on staff. As needed.
f. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Supervisor
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 Officer
j. Grant writers	N	

Administrative and Technical Capability		
Staff / Personnel Resources	Available (Y or N)	Department / Agency / Position
k. Staff with expertise or training in benefit/cost analysis		
*All communities participate in the National Flood Insurance Program; as such, they are required by the regulations to have an appointed floodplain manager.		

8.20.10.3 Fiscal Capability

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

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

8.20.10.4 Overall Capabilities

The Town of Schodack’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	Moderate	Low	Low	Moderate
How these capabilities can be expanded and/or improved to reduce risk				
Funding from the federal government.				

8.20.10.5 Community Classifications

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

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 Schodack’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/>

8.20.11 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.

8.20.12 PLAN FOR EVACUATION NEEDS AND SHELTERING

The Town of Schodack has an emergency response plan¹¹. It does not have a post-disaster recovery plan or a post-disaster recovery ordinance¹². 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 Schodack 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.

¹¹ Source: Local Capability Assessment

¹² Source: Local Capability Assessment

8.20.13 FUTURE NEEDS - RISK/VULNERABILITY

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

8.20.14 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 Schodack 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 Schodack undertook the following plan integration mechanisms over the last planning cycle:

- Issued a letter to each community department head to solicit their support and explore opportunities for integrating hazard mitigation planning objectives into daily activities.
- Worked with the Planning Department to educate them on the Hazard Mitigation Plan and encourage that on the next update of the master plan, general or comprehensive plan, hazard mitigation for natural hazards is addressed.
- Having participated in the NFIP and only enforcing minimum requirements at the time of the first plan's adoption, coordinated with your Floodplain Administrator to determine if enforcement beyond FEMA minimum requirements would be prudent for the community. We coordinate through plan review building permit review and our MS-4 program.
- Community was already enforcing regulations beyond FEMA minimum requirements. Beyond FEMA requirements, storm water runoff our MS-4 program is being enforced.
- Community currently has a local zoning ordinance.
- Worked with the local zoning board to educate them on the Hazard Mitigation Plan and encourage consideration of low occupancy, low-density zoning in hazard areas, when practicable.]
- Worked with the Department of Public Works to adopt more rigorous procedures for inspecting and cleaning debris from streams and ditches (i.e., more frequently). We have a full mapping completed of all storm drains and out lets of

- our town and track the cleaning of each.
- Worked with Planning Department has added hazard vulnerability to subdivision and site plan review criteria. We have a stormwater program and review all plans at time of site plan.
- Reached out to partner groups in the community (i.e., nonprofit organizations, businesses, etc.), through the MS-4 program, to identify those who may be willing to donate goods or services and create a database of contact information and indicated goods/services.
- Actively sought citizen volunteers to help implement mitigation programs and activities, through the MS-4 program.

Targeted Plan Integration Activities for the Next Planning Cycle (2019-2024) – The Town of Schodack 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.
- 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.
- Add hazard vulnerability to subdivision and site plan review criteria.
- Perform inventories of historic sites in hazard areas in your community to identify where special treatment may be needed to protect them from specific natural hazards.
- Require the Department of Public Works to inspect and clean debris from streams and ditches more frequently.
- 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.
- 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.)

8.20.15 MITIGATION STRATEGY

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

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

8.20.15.1 Progress on 2011 HMP Initiatives

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

Overall priorities of the Town have not changed since the last version of the plan was prepared in 2011.

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	
SD-1	Clove Road Bridge - Raise road and install relief culverts to eliminate road flooding.	High	Flooding / Emergency Services Response	Highway Department				x	Clove Road flooding, road can be closed for up to 24 hours. Most of the time it overflows and scours. Repairs are about \$3,000 to \$5,000. One of the roads that goes off the road by where it floods, the home gets flooded sometimes.	x		Carried forward with changes - initial cost estimate for previously proposed solution is very expensive compared to repair costs. Needs engineering. Project will be divided into phases (Phase 1 = Study; Phase 2 = Project)
SD-2	Clove Road Sloughing. Drive pile sheeting to stabilize bank.	Medium	Landslide	Highway Department				x	DOT recommended the fix is about \$400,000 to put sheeting in at this location. Repair maybe every 8-10 years, repair is about \$10,000. Not likely to be cost effective.	x		Carried forward with changes - initial cost estimate for previously proposed solution is very expensive compared to repair costs. Needs engineering. Project will be divided into phases (Phase 1 = Study; Phase 2 = Project)
SD-3	Western Road Sloughing. Drive pile sheeting to stabilize bank.	Medium	Landslide / Emergency Services Response	Highway Department				x	Within 24 hours of rain stopping, water's down, road opens, and things are back to normal	x		Carried forward with changes - initial cost estimate for previously proposed solution is very expensive compared to repair costs. Needs engineering. Project will be divided into phases (Phase 1 = Study; Phase 2 = Project)
SD-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					Town of Schodack will post the plan on our web site with links to the County and will continue to inform resident	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SD-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	Ongoing at this time should have ready for town board for 2020	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	
SD-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 did not have a need to go to the county for support/training.	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SD-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 of Schodack has a comprehensive Plan but at this time we have not revised it to incorporate natural disaster techniques	x		County is carrying forward this County-led activity with no changes; our municipality will carry it forward as well.
SD-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.
SD-NFIP-1	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	High	Flooding	Town Board			x		Ordinance is dated 1989. we are working on our ordinance and will be before the Town Board in 2020	x		we have reviewed the code and have updated
SD-NFIP-4	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	High	Flooding	Town Board			x		FEMA has not issued new FIRMs since the last hazard mitigation plan was prepared.	x		Ongoing type of activity; will be carried forward with no changes.
SD-NFIP-5	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	High	Flooding	Town Board				x	Building inspector is the flood plan manager	x		Ongoing type of activity; will be carried forward with no changes.
SD-NFIP-6	Join the Community Rating System (CRS)	High	Flooding	Town Board				x	Municipality opted not to enter CRS.		x	Municipality does not intend to explore further during next planning cycle.

8.20.15.2 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 Schodack, 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	
-	Clove Road Culverts (3) Initiative SD-1	Silt built up at culvert outlets	Excavate and remove built up silt	Cost	Approximately \$2,500
				Level of Protection	Enabled more efficient flow of water
				Damages Avoided; Evidence of Success	Unable to measure damages avoided or evidence of success. Area floods during extreme rain events
-	Phillips Road Arch Culvert Replacement	Failed box culvert	Antiquated box culvert failed causing flooding	Cost	Approximately \$40,000
				Level of Protection	Enabled efficient water flow
				Damages Avoided; Evidence of Success	Avoid future damages to road from flooding. No flooding at the location since replacement

8.20.15.3 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 Schodack 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 ¹³ ?	EHP ¹⁴ Issues ?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁵	Priority ¹⁶	Action Worksheet Provided? ¹⁷
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
1	Clove Road Flooding (2011 SD-1)	3	Flooding	Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. There is a nearby home on Jarmann Way (on the upstream side of the bridge) that gets flooded, but it is unclear whether the proposed project at the bridge would reduce flooding of the home. Repair costs of \$3,000 to \$5,000 are incurred every 8 to 10 years, not including functional downtime or repairs needed at the residence.	Tentative Solution: Raise road and install relief culverts to eliminate road flooding. Needs engineering. Phase 1 – Study. Engineering combined with SD-2 to determine whether the proposed solution is the best solution. Phase 2 – Implement project.	N	N	Phase 1 (Study): 5 years Phase 2 (Project): On completion of Phase 1, the Town will apply for FEMA PDM grant each year; and will apply for FEMA HMGP grant with every new disaster declaration	Superintendent of Highways	Phase 1 (Study)- Low Phase 2 (Project)- High	Damages of \$3k to \$5k every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; and possible flood reduction at one nearby home.	Phase 1 (Study) – Local budget Phase 2 (Project) - FEMA PDM or FEMA HMGP, with Town funding the grant's local match	High	Yes
2	Clove Road Sloughing (2011 SD-2)	3	Flooding and Landslide	Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. Repair costs of about \$10,000 are incurred every 8 to 10 years. Road sloughs over time after repairs	Tentative Solution: Drive pile sheeting to stabilize bank. Needs engineering. Phase 1 – Study. Engineering combined with SD-1 to determine whether the proposed solution is the best solution. Phase 2 – Implement project.	N	N	Phase 1 (Study): 5 years Phase 2 (Project): On completion of Phase 1, the Town will apply for FEMA PDM grant each year; and will apply for FEMA HMGP grant with every new disaster declaration	Superintendent of Highways	Phase 1 (Study)- Low Phase 2 (Project)- High	Damages of about \$10,000 every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; Limit road repairs	Phase 1 (Study)- Local budget Phase 2 (Project)- FEMA PDM or FEMA HMGP, with Town funding the grant's local match	High	Yes
3	Western Road Sloughing (2011 SD-3)	3	Flooding and Landslide	Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. Repair costs of about \$10,000 are incurred every 8 to 10 years. Road sloughs over time after repairs	Tentative Solution: Drive pile sheeting to stabilize bank. Needs engineering. Phase 1 – Study. Engineering to determine whether the proposed solution is the best solution. Phase 2 – Implement project.	No	No	Phase 1 (Study): 5 years Phase 2 (Project): On completion of Phase 1, the Town will apply for FEMA PDM grant each year; and will apply for FEMA HMGP grant with every new disaster declaration	Superintendent of Highways	Phase 1 (Study)- Low Phase 2 (Project)- High	Damages of about \$10,000 every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; Limit road repairs	Phase 1 (Study) – local budget Phase 2 (Project)- FEMA PDM or FEMA HMGP, with Town funding the grant's local match	Medium	No

¹³ CF – Critical Facility. Please respond “Y” (yes) if the project’s purpose is to protect a critical facility, or “N” (no) if not.

¹⁴ 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.

¹⁵ 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.

¹⁶ Priority – See “Prioritization Methodology” on the next page.

¹⁷ 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 ¹³ ?	EHP ¹⁴ Issues ?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁵	Priority ¹⁶	Action Worksheet Provided? ¹⁷
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
4	Participate in County-Led Hazard Mitigation Outreach (2011 SD-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	Ongoing with regular outreach conducted each year	County-led action item. CPG Member, Town Supervisor and Town Board	Low	High- Increase public awareness will reduce damages and increase resiliency	Local	High	No
5	Request code/ordinance review by County as needed (2011 SD-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	Ongoing, as codes/ordinances are updated	County-led action item. CPG Member, Town Supervisor and Town Board	None	High- Safer community	Local	Medium	No
6	Send CEO to County-Led Training (2011 SD-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	Within 5 years	County-led action item. CPG Member, Town Supervisor and Town Board	None	High- Continued education will benefit the town residents	Local	Medium	No
7	Send Comprehensive Plan Update to County for Review by County Planning (2011 SDF-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	Ongoing, as updates are done for Town comprehensive/ master plan	County-led action item. CPG Member, Town Supervisor and Town Board	None	High- Keep town looking to the future with a focus on hazard mitigation and community resiliency	Local	High	No
8	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 SDF-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, as workshops are offered by County	County-led action item. CPG Member, Town Supervisor and Town Board	None	High-Keep zoning and planning boards abreast of changes	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 ¹³ ?	EHP ¹⁴ Issues ?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁵	Priority ¹⁶	Action Worksheet Provided? ¹⁷
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
9	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 SD-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, whenever FEMA regulations are revised	Town Floodplain Manager	None	High- construction aligning with NFIP requirements is more protected from flooding and less likely to be damaged during a flood event	Local	High	No
10	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 SD-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, whenever FEMA issues new FIRMs	Town Floodplain Manager	None	High- regulating to the latest FIRMs instead of old ones lowers damages and improves resiliency	Local	High	No
11	Require CFM Certification (2011 SD-NFIP-5)	2	Flooding	Floodplain manager would benefit from the training and certification regarding FEMA-480.	Require staff involved in floodplain management and ordinance enforcement to become Certified Floodplain Managers (CFMs)	No	No	2024	Town Floodplain Manager	Low (staff time and limited fee)	High (better knowledge will improve compliance with NFIP and flood protection of new structures and substantial improvements for greater community resiliency)	Local	High	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	Clove Road Flooding (2011 SD-1)	Flooding	L	H	M Damages of \$3k to \$5k every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; and possible flood reduction at one nearby home.	M Phase 1 (Study)-Low Phase 2 (Project)-High	M	-	L	M	L	-	-	High
2	Clove Road Sloughing (2011 SD-2)	Flooding and Landslide	L	H	M Damages of about \$10,000 every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; Limit road repairs	M Phase 1 (Study)-Low Phase 2 (Project)-High	M	-	L	M	L	-	-	High

3	Western Road Sloughing (2011 SD-3)	Flooding and Landslide	L	H	M Damages of about \$10,000 every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; Limit road repairs	M Phase 1 (Study)- Low Phase 2 (Project)- High	M	-	L	M	L	-	-	Medium
4	Participate in County-Led Hazard Mitigation Outreach (2011 SD-CL-1)	All hazards	L	H	High- Increase public awareness will reduce damages and increase resiliency	Low	M	-	H	H	-	-	-	High
5	Request code/ordinance review by County as needed (2011 SD-CL-2)	All hazards	L	H	High- Safer community	None	M	-	H	H	-	-	-	Medium
6	Send CEO to County-Led Training (2011 SD-CL-3)	All hazards	L	H	High- Continued education will benefit the town residents	None	M	-	H	H	-	-	-	Medium
7	Send Comprehensive Plan Update to County for Review by County Planning (2011 SDF-CL-4)	All hazards	L	H	High- Keep town looking to the future with a focus on hazard mitigation and community resiliency	None	M	-	H	H	-	-	-	High
8	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 SDF-CL-5)	All hazards	L	H	High-Keep zoning and planning boards abreast of changes	None	M	-	H	H	-	-	-	Low
9	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 SD-NFIP-1)	Flooding	L	H	High- construction aligning with NFIP requirements is more protected from flooding and less likely to be damaged during a flood event	None	M	-	H	H	-	-	-	High
10	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 SD-NFIP-4)	Flooding	L	H	High- regulating to the latest FIRMs instead of old ones lowers damages and improves resiliency	None	M	-	H	H	-	-	-	High
11	Require CFM Certification (2011 SD-NFIP-5)	Flooding	L	H	High (better knowledge will improve compliance with NFIP and flood protection of new structures and substantial improvements for greater community resiliency)	L	M	-	H	H	-	-	-	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 Schodack are included on the following pages.

Section 8.20 - Jurisdictional Annex, Town of Schodack

NYS DHSES Action Worksheet			
Project Name:	Clove Road Flooding		
Project Number:	1		
Risk / Vulnerability			
Hazard of Concern:	Flooding		
Description of the Problem:	Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. There is a nearby home on Jarmann Way (on the upstream side of the bridge) that gets flooded, but it is unclear whether the proposed project at the bridge would reduce flooding of the home. Repair costs of \$3,000 to \$5,000 are incurred every 8 to 10 years, not including functional downtime or repairs needed at the residence.		
Action or Project Intended for Implementation			
Description of the Solution:	Tentative Solution: Raise road and install relief culverts to eliminate road flooding. Needs engineering. Phase 1 – Study. Engineering combined with SD-2 to determine whether the proposed solution is the best solution. Phase 2 – Implement project.		
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:	Phase 1 Study – n/a Phase 2 Project - 100 year	Estimated Benefits (losses avoided):	Phase 1 Study – n/a Phase 2 Project - Damages of \$3k to \$5k every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; and possible flood reduction at one nearby home.
Useful Life:	Phase 1 Study- n/a Phase 2 Project - 50 years		
Estimated Cost:	Phase 1 Study – Low Phase 2 Project - High		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Phase 1 (Study): 5 years Phase 2 (Project): On completion of Phase 1, the Town will apply for FEMA PDM grant each year; and will apply for FEMA HMGP grant with every new disaster declaration
Estimated Time Required for Project Implementation:	within 5 years after grant funding is received	Potential Funding Sources:	Phase 1 (Study): Town budget. Phase 2 (Project): FEMA PDM or HMGP, with Town budget for grant's required local match
Responsible Party: (Department/ Organization)	Town of Schodack Highway Department	Local Planning Mechanisms to be Used in Implementation, if any:	Falls under highway department's existing authorities
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Not viable; road will continue to flood and be closed. House will continue to flood.
	Implement Tentative Solution	High	Not viable; initial conversations with NYSDOT indicate that costs could be very high and a more cost effective solution may be out there.
	Divide into phases, where Phase 1 is a study and Phase 2 is a project	Phase 1 – Low Phase 2 – TBD based on Phase 1	Best solution - Studying the problem further will ensure that limited funding resources are spent wisely
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 8.20 - Jurisdictional Annex, Town of Schodack

NYS DHSES Action Worksheet			
Project Name:	Clove Road Sloughing		
Project Number:	2		
Risk / Vulnerability			
Hazard of Concern:	Flooding and landslide		
Description of the Problem:	Road floods over in heavy rain. It can be closed for up to 24 hours. Most of the time there is overflow and scouring. Repair costs of about \$10,000 are incurred every 8 to 10 years. Road sloughs over time after repairs		
Action or Project Intended for Implementation			
Description of the Solution:	Tentative Solution: Drive pile sheeting to stabilize bank. Needs engineering. Phase 1 – Study. Engineering combined with SD-1 to determine whether the proposed solution is the best solution. Phase 2 – Implement project.		
Is this project related to a Critical Facility?	Yes * <input type="checkbox"/>	No <input 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:	Phase 1 Study – n/a Phase 2 Project - 100 year	Estimated Benefits (losses avoided):	Phase 1 Study – Further evaluation will ensure the town's limited funds will be used most wisely
Useful Life:	Phase 1 Study – n/a Phase 2 Project - 50 years		Phase 2 Project - Damages of about \$10,000 every 8 to 10 years would be eliminated; also, the road's functional downtime would be eliminated; Limit road repairs
Estimated Cost:	Phase 1 Study – Low Phase 2 Project - High		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Phase 1 (Study): 5 years Phase 2 (Project): On completion of Phase 1, the Town will apply for FEMA PDM grant each year; and will apply for FEMA HMGP grant with every new disaster declaration
Estimated Time Required for Project Implementation:	within 5 years after grant funding is received	Potential Funding Sources:	Phase 1 (Study): Town budget. Phase 2 (Project): FEMA PDM or HMGP, with Town budget for grant's required local match
Responsible Party: (Department/ Organization)	Town of Schodack Highway Department	Local Planning Mechanisms to be Used in Implementation, if any:	Falls under highway department's existing authorities
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Not viable; sloughing will continue, and road closures will continue
	Implement Tentative Solution	High	Not viable; initial conversations with NYSDOT indicate that costs could be very high and a more cost effective solution may be out there.
	Divide into phases, where Phase 1 is a study, and Phase 2 is a project.	Phase 1 – Low Phase 2 – TBD based on Phase 1	Best solution - Studying the problem further will ensure that limited funding resources are spent wisely
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:			