

8.5 - Jurisdictional Annex, Town of East Greenbush

This section presents the jurisdictional annex for the Town of East Greenbush. 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.

8.5.1 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: Scott F. Gallerie Title: Commissioner of Public Works Address: 225 Columbia Turnpike, Rensselaer, NY 12144 Phone Number: 518-477-6103 E-mail Address: sgallerie@eastgreenbush.org				Name: Adam Yagelski Title: Director of Planning Address: 225 Columbia Turnpike, Rensselaer, NY 12144 Phone Number: 518-694-4011 E-mail Address: ayagelski@eastgreenbush.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	Adam Yagelski	ayagelski@eastgreenbush.org	(518) 694-4011	9-Jan-19	e-mail	Yes
Emergency Manager	Christopher Lavin	info@egpolice.com	(518) 479-2527	16-Jan-19	person	Yes
Floodplain Manager/Administrator	Kevin Hitchcock	khitchcock@eastgreenbush.org	(518) 477-6225	9-Jan-19	e-mail	Yes
Public Works Director / City Engineer	Scott F. Gallerie Sr	sgallerie@eastgreenbush.org	(518) 477-6103	9-Jan-19	person	Yes
Building Code Official	Kevin Hitchcock	khitchcock@eastgreenbush.org	(518) 477-6225	9-Jan-19	e-mail	Yes
Fiscal/Budget Officer	Meaghan Hart	mhart@eastgreenbush.org	(518) 477-5842	9-Jan-19	e-mail	Yes
Manager/Administrator	Jack Conway	jconway@eastgreenbush.org	(518) 477-4775	9-Jan-19	e-mail	Yes
Elected Officials	Jack Conway	jconway@eastgreenbush.org	(518) 477-4775	9-Jan-19	e-mail	Yes
Rosewood Nursing Home	Keith Henchey	khenchey@rosewood-nursing.com	(518) 286-1621 x-213	21-Feb-19	e-mail	No response yet
Evergreen Commons Nursing Facility	Sarah Paparella	paparella@evergreencommonsreh-ab.com	(518) 479-4662 x-22302	21-Feb-19	e-mail	No response yet
University at Albany	Aran Mull	amull@albany.edu	(518) 427-0412	21-Feb-19	e-mail	No response yet
Significant Business	Kyle Cherry, Regeneron	kyle.cherry@regeneron.com	-518	4-Feb-19	e-mail	No response yet
Neighboring County 1	Albany County	Unknown	Unknown	To be determined	e-mail	No response yet
Neighboring County 3	N/A	N/A	N/A	N/A	N/A	N/A
Neighboring County 4	N/A	N/A	N/A	N/A	N/A	N/A
Tribal Group/Nation	Andrew Brown	N/A	N/A	5-Feb-19	Mail	No

8.5.2 JURISDICTION PROFILE

8.5.2.1 Location and Land Area

The Town of East Greenbush is located in southwest Rensselaer County, in the eastern part of New York State. It shares a border with the Town of North Greenbush to the north; Town of Schodack to the south; Town of Sand Lake 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 East Greenbush has a total area of 24.29 square miles (62.92 km²), of which 24.02 square miles (62.21 km²) is land and 0.27 square miles (0.71 km²) is water.

8.5.2.2 Population

According to the 2010 U.S. Census Bureau's American Community Survey 5-Year Estimates, the population of the Town of East Greenbush is estimated to be 16,473 persons.

8.5.2.3 Demographics

Of a total area of 24.35 square miles (2010 Census data), the land area is 24.09 square miles and population per square mile is 645.8 persons.

Of the total population, there are 91.2 males per 100 females (all ages). Persons under 18 years represent 21.2% 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 1,186, or 7.5%, of which 25.5% 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, 90.6% are high school graduates or higher, and 34.1% 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 6,702 total households and 2.41 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 \$77,342; the per capita income in past 12 months (2017) was \$40,087; and the percentage of persons in poverty was 5.3%. 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 11.7%, and percentage of people with a disability over age 65 years is 34.3%. The total percentage of persons (civilian, noninstitutionalized) without health insurance is 3.0%. 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.

8.5.2.4 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.

East Greenbush was part of the Manor of Rensselaerswyck, and Albany County prior to Rensselaer County's creation in 1791. The town of Clinton was established on February 23, 1855 at the same time as the town of North Greenbush. Three years later, on April 14, 1858, the town name was changed to East Greenbush by New York State Laws of 1858, Chapter 194. The name Greenbush comes from the Dutch words "Greenen Bos" meaning "pine woods". The town originally included land that was annexed to the City of Rensselaer in 1902 and is now the industrial and residential south end of the city.

8.5.2.5 Governing Body Format

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

8.5.2.6 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 East Greenbush reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019.

The Town of East Greenbush noted major development taking place and/or planned for the next five years in the municipality. Residential development has picked up with the economic upswing while commercial development continues apace. In 2018, the Town approved construction of 144 single-family units, 90 of which are presently under construction. About 950 residential units are actively seeking approval; most of these units are concentrated along the US Route 4 and NY-151 corridors, and all are part of multi-family developments. In 2018, the Town approved 425,110 square feet of new commercial space. Regeneron Pharmaceuticals has constructed a warehouse and is presently constructing a manufacturing building at their Tempel Lane Campus and has also received environmental approvals for a third phase at the Tempel Lane campus consisting of an office building and a parking garage. A 37,000 sf building in the East Greenbush Technology Park is under construction and the Park has received environmental approvals for total development of between 692,300 sf and 850,000 sf, depending upon the intensity of use. Tech Valley Dr. In 2018 an asphalt plant was approved for the industrial area between Route 9J and the Hudson River, and the Town has received an application for an initial phase of site preparation for an industrial park in the same area.

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
Witbeck Cluster Subdivision	Residential	54	Phillips Road, East Greenbush	Not provided	Unknown-no block/lot	Under Construction
Rysedorph Subdivision	Residential	26	Olcott Lane, East Greenbush	Not provided	Unknown-no block/lot	Under Construction
Deer Pond Subdivision	Residential	62	Elliot Road, East Greenbush	Not provided	Unknown-no block/lot	In Planning Phase
East Greenbush Technology Park Part 2	Commercial	1	Tech Valley Drive, East Greenbush	Not provided	Unknown-no block/lot	Under Construction
Regeneron Tempel Lane Campus	Commercial	2	Tempel Lane, East Greenbush	Not provided	Unknown-no block/lot	Under Construction with additional phases in Planning Phase
Regeneron Discovery Drive Campus	Commercial	2	Discovery Drive, East Greenbush	Not provided	Unknown-no block/lot	Approved for construction
Browe Asphalt Plant	Commercial	1	Sun Oil Road, Rensselaer	Not provided	Unknown-no block/lot	Approved for construction
East Greenbush Riverfront Industrial Park	Commercial	n/a	American Oil Road, Rensselaer	Not provided	Unknown-no block/lot	Seeking planning approval for first phase

The Town of East Greenbush enforces the Town's Comprehensive Zoning Law (CZL), including a Watercourse Management Overlay District, to protect new development from the effects of natural hazards. A primary purpose of the district is to preserve natural resources and protect people and structures from flood hazards. The Town's CZL also includes Erosion, Sediment Control and Stormwater Management regulations that prevents disturbances on steep slopes, 25% or more and excessive clearing and grading operations and requires a 25'

buffer around federal jurisdictional wetlands. The following laws are presently part of the Town code: Environmental Quality Review Law (Chapter 168 of Town Code); Environmental Conservation (Chapter 164 of Town Code); Freshwater Wetlands (Chapter 215 of Town Code); Excavations (Chapter 175 of Town Code); Grading and Filling (Chapter 229 of Town Code); and Flood Damage Prevention. Finally, the Town is currently developing a Natural Resources Inventory, which depicts the location of waterbodies, wetlands, steep slopes, regulated facilities, and floodplains.

8.5.3 HAZARD IDENTIFICATION

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

Profiled Hazards in the Town of East Greenbush													
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			
East Greenbush, 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.

8.5.4 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

Natural Hazard Event History (January 2011 through December 2018)					
Event Type	Count	Fatalities	Injuries	Property Damage	Crop Damage
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 East Greenbush since 2011 include:

August 28, 2011 – Irene

The remnants of Hurricane Irene brought heavy to extreme rainfall throughout Rensselaer County. In East Greenbush, a National Weather Service Cooperative Observer reported a measured wind gust of 41 mph.

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.

June 3, 2014 – Thunderstorm Winds

Thunderstorms produced very heavy rain in a short period of time which led to some flash flooding, especially in urban and poor drainage areas. A few of the thunderstorms also produced strong wind gusts, which caused damage to trees and power lines. Trees and wires were reported down at the intersection of Brookview Road and Shady Lane in East Greenbush due to thunderstorm winds.

July 2, 2014 – Thunderstorm Winds

Multiple trees and wires were reported down along Columbia Turnpike (U.S. Routes 9 & 20) at the intersection with Spring Hurst Drive due to thunderstorm winds.

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

Numerous strong to severe thunderstorms occurred across Rensselaer County. Thunderstorm winds caused damages throughout the county, downing trees and power lines, and heavy rains caused flooding in many areas of the county.

8.5.5 NATIONAL FLOOD INSURANCE PROGRAM SUMMARY

The Town of East Greenbush has participated in FEMA's National Flood Insurance program (NFIP) since March 18, 1980.

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

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

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

Name: KEVIN HITCHCOCK Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator
 Community: CODE ENFORCEMENT OFFICER Email and Phone: khitchcock@eastgreenbush.org 518-477-6225



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?
December 2, 1987	March 18, 1980	CODE ENFORCEMENT OFFICER	[] Yes [X] No	[X] Yes [] No	[X] Yes [] No

Provide an explanation of NFIP administration services (i.e., permit review, GIS, education or outreach, inspections, engineering capability, etc.):

Identifying locations within the floodplain. Ensuring construction methods comply. Design professional hired by applicant, Town designated engineer to be hired by the applicant if required.

Describe barriers to running an effective NFIP program in the community (if applicable):

Lack of training

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	[] Yes [X] No	[] Yes [X] No	[X] Yes [] No	[X] Yes [] No	[] Yes* [X] No* * Class _____	[] Yes [] No	[X] Yes [] No

*Describe any outstanding compliance issues (i.e., current violations):

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

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

NFIP-1

Name: Kevin Hitchcock Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator
 Representing: TOWN OF EAST GREENBUSH Email and Phone: khitchcock@eastgreenbush.org 518-477-6225



Provide an explanation of your local floodplain permitting process:

Applicants must meet the requirement of Local Law No. 3 of 1987 as well as New York State and Federal Laws with regards to activities conducted within Floodplain areas.

Does your community intend to continue floodplain identification and mapping services including any local requests for map updates?	Does your community intend to initiate/continue the buyouts of repetitive loss properties?	Does your community intend to commit staff or resources to improve local mapping or code administration in the future?	Does your community intend to provide local outreach to promote the sale of flood insurance?	Does your community intend to participate in RiskMAP meetings and planning initiatives?	Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to continue to implement home improvement programs designed to minimize basement flooding?	Does your community intend to continue to implement roadway improvements to reduce damage from future flooding events?	Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority?
[X] Yes [] No	[] Yes [X] No	[X] Yes [] No	[X] Yes [] No	[X] Yes [] No	[X] Yes [] No	[X] Yes [] No	[X] Yes [] No	[X] Yes [] 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?
[] Yes [X] No	[X] Yes [] No	[X] Yes [] No	[] Yes * [X] No

* If you answered "yes", that there have been changes to your local program since 2009, please describe:

Provide a description of your community assistance and monitoring activities:

Permit review, acceptance of engineered building plans, assistance with mapping, education / interpretation of map boundaries.

NFIP participating communities are required to update/revise their floodplain management ordinance to ensure that it complies with the latest FEMA regulations. Will your community continue to commit to this program requirement?	NFIP participating communities are also required to update/revise their floodplain management ordinance to be consistent with the latest FIRMs. Will your community continue to commit to this program requirement?
[X] Yes [] No	[X] Yes [] No

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

8.5.6 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 East Greenbush.

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 East Greenbush	\$3,659,758,000	6	1	1	0	0	1	0	0	0	0	1	2	0	0	4	6	0	3

Rensselaer County	Population, Census 2010:	159,429
Town of East Greenbush	Population, Census 2010:	16,473
Rensselaer County	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	30,429
Town of East Greenbush	Vulnerable Population, Census 2010 (under 5 years, and over 64 years)	3,271

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 11 percent of the land area of the Town of East Greenbush 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 (%)
East Greenbush, Town of	15,672	1,746	11%

Improved Property. Approximately three percent of improved property in the Town of East Greenbush 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 (%)
East Greenbush, Town of	\$3,659,758,000	\$100,211,645	3%

Population. Approximately one percent of the population in the Town of East Greenbush 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
East Greenbush, Town of	16,473	156	1%

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 East Greenbush.

Critical Facilities in the Floodplain			
Municipality	Type of Facility	Name of Facility	Flood Zone ⁷
East Greenbush, Town of	COMMUNICATION FACILITY	WTMM 1300	A/AE/AO
East Greenbush, Town of	OIL FACILITY	AMERADA HESS CORPORATION RENSELAER TERM	A/AE/AO
East Greenbush, Town of	OIL FACILITY	TRANSMONTAIGNE TERMINAL	A/AE/AO

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

Critical Facilities in the Floodplain			
Municipality	Type of Facility	Name of Facility	Flood Zone ⁷
East Greenbush, Town of	PORT	Amerada Hess Corp. Wharf	A/AE/AO
East Greenbush, Town of	PORT	International Petroleum Traders Dock	A/AE/AO
East Greenbush, Town of	PORT	National Gypsum Co. East Greenbush Plant	A/AE/AO

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

8.5.7 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 East Greenbush, the hazard with the highest estimated average annual losses is flooding.

Summary of Annual Loss Estimates – Town of Berlin⁸

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
East Greenbush, Town of	\$3,659,758,000	\$154	\$2,311	\$9,482	\$1,178	\$52,026	\$13,177	\$3,693	\$0	\$79,160	\$10,205	\$0	\$10

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

8.5.8 HAZARD RANKINGS AND KEY RISK FINDINGS

Hazard rankings for the Town of East Greenbush 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 East Greenbush.

Hazard Rankings – Town of East Greenbush					
Hazard	Future Probability	Potential Consequence	Relative Risk	Hazard Priority	Average Annualized Losses ⁹
Extreme Temperatures (Coldwave/ Heat Wave)	Low	Low	Low	Low	\$154
Hurricane/ Tropical Storm	Low	High	Moderate	Moderate	\$2,311 Wind; \$9,482 Wind + Flood
Lightning	High	Low	Low	Low	\$1,178
Tornado	Low	High	High	High	\$52,026
Wind	High	Low	High	High	\$13,177
Winter Storm (Ice Storm/Snow Storm)	High	Moderate	Moderate	Moderate	\$3,693
Drought	Low	High	Low	Low	\$0
Flood	High	High	High	High	\$79,160
Earthquake	Low	High	Moderate	Moderate	\$10,205
Landslide	High	Low	Moderate	Moderate	\$0
Wildfire	Low	Low	Low	Low	\$10

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

- Hampton Manor is a neighborhood of approximately 650 homes constructed in the late 1940's. The design of the stormwater collection system is outdated and does not adequately handle heavy storm events. Neighborhoods between the outlet of Hampton Manor Lake and the City of Rensselaer are at risk of flooding.
- Prospect Heights is an older neighborhood that was constructed in the 1940's and 1950's time frame, with one portion, Brook Street being developed and added around 2000. The stormwater collection system is outdated and does not adequately handle heavy storm events. Stormwater drains were constructed after the original development was built to deal with specific issues. Residents in the Prospect Heights development have experienced damage to homes when heavy rains have overflowed existing drainage.

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

- Sherwood Park is an older development that has been partially retrofitted with a storm drainage system. The system is not adequate for increasingly frequent heavy rain events.
- The pipe-arch currently installed on Michael Road has flooded at least three times over the last twenty years resulting in road closures and damage to the roadway.
- The Catskill Avenue Dam in question is deteriorating at a normal rate and should be reconditioned or replaced as necessary. This dam retains water from the Hampton Manor Lake and its failure could result in significant property damage in the City of Rensselaer.
- Lack of Public Awareness of Hazards and methods to address.
- The Town’s Comprehensive Plan guides development and investment and is a framework to address multiple issues. Unless, hazard mitigation is integrated into the Comprehensive Plan, as appropriate, gaps relative to hazard mitigation in land use regulation, investment, and other actions identified in the plan will be created.

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

8.5.9 OUTREACH TO THE PUBLIC AND OTHER STAKEHOLDERS

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

Outreach Activities			
Date of Activity	Type of Activity	Activity Details	Lead Department and/or Staff Title Who Undertook Activity
[4 Feb 19]	[Mail / Email Invitation to Participate]	[Mailed Letter to Andrew Brown Tribal Council]	[Public Works Commissioner]
[21 Feb 19]	[e-mail Invitation to Participate]	[E-Mailed Rosewood Gardens Nursing Center]	[Planning Director Public Works Commissioner]
[21 Feb 19]	[e-mail Invitation to Participate]	[E-Mailed Evergreen Commons Nursing Home]	[Public Works Commissioner]
[22 Feb 19]	[e-mail Invitation to Participate]	[E-mailed Town of Bethlehem]	[Planning Director]
[2 April 19]	[Phone meeting]	[Andrew Brown from The Tribes contacted the Town to obtain details on the Multi-Jurisdictional Hazard Mitigation Program]	[Public Works Commissioner]

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

8.5.10 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.

8.5.10.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of East Greenbush. 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 and Code Dept.	Adopted by the Town Board of the Town of East Greenbush 2-14-1996 by L.L. No. 1-1996
b. Zoning ordinance	Y	Building and Code Dept.	Comprehensive Zoning Law Local Law #: 1 of 2008, adopted 6/11/2008
c. Subdivision ordinance or regulations	Y	Building and Code Dept.	Comprehensive Zoning Law Local Law #: 1 of 2008, adopted 6/11/2008; 4-2016 11-16-2016 Land subdivision regulations amendment8
d. Special purpose ordinances (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Building and Code Dept., Planning and Zoning Dept.	Adopted by the Town Board of the Town of East Greenbush 12-2-1987 by L.L. No. 3-1987; Comprehensive Zoning Law Local Law #: 1 of 2008, adopted 6/11/2008
e. Growth management ordinances (also called "smart growth" or anti-sprawl programs)	Y	Planning and Zoning Dept.	Western East Greenbush Generic Environmental Impact Statement, 2009
f. Site plan review requirements	Y	Building and Code Dept.	Comprehensive Zoning Law Local Law #: 1 of 2008, adopted 6/11/2008
g. General, comprehensive or master plan	Y	Planning and Zoning Dept.	Comprehensive Zoning Law Local Law #: 1 of 2008, adopted 6/11/2008
h. A capital improvements plan	Y	Dept. of Public Works	n/a
i. An economic development plan	N	n/a	n/a
j. An emergency response plan	Y	East Greenbush Police Department	Last updated 10/15/2009
k. A post-disaster recovery plan	Y	Planning and Zoning Dept.	Plan dated June 2012
l. A post-disaster recovery ordinance	N	n/a	n/a

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)
m. Real estate disclosure requirements	N	n/a	n/a
n. Other	n/a	n/a	n/a

8.5.10.2 Administrative and Technical Capability

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

Administrative and Technical Capability		
Staff / Personnel Resources	Available (Y or N)	Department / Agency / Position
a. Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Planning and Zoning Department, Town Designated Engineers
b. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Planning and Zoning Department, Public Works Department, Building Department, Town Designated Engineer
c. Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	Planning and Zoning Department, Town Designated Engineer
d. Floodplain manager	Y	Kevin Hitchcock, Code Enforcement Officer, Building Department
e. Surveyors	Y	Town Designated Engineer
f. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Planning and Zoning Department, Public Works Department, Building Department, Town Designated Engineer
g. Personnel skilled in GIS and/or HAZUS	Y	Adam Yagelski, Director of Planning and Zoning
h. Scientists familiar with the hazards of the community	N	
i. Emergency manager	Y	Christopher Lavin, Chief of Police
j. Grant writers	Y	Adam Yagelski, Director of Planning and Zoning, Town Designated Engineers
k. Staff with expertise or training in benefit/cost analysis	Y	Meaghan Hart, Director of Finance; Scott Gallerie, Dept. of Public Works (infrastructure)
*All communities participate in the National Flood Insurance Program; as such, they are required by the regulations to have an appointed floodplain manager.		

8.5.10.3 Fiscal Capability

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

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

8.5.10.4 Overall Capabilities

The Town of East Greenbush'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
High	Moderate	Moderate	Moderate	High
How these capabilities can be expanded and/or improved to reduce risk:				
Like many municipalities across the state, the Town has limited resources to administer required programs, including hazard mitigation strategies. Additional resources can be obtained through grant programs. The Town will continue to cooperate with involved agencies, such as the local fire protection organizations.				

8.5.10.5 Community Classifications

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

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

Notes:

- = Unavailable

N/A = Not applicable

NP = Not participating.

* CRS Ranking as of April 2019

The classifications listed above relate to the Town of East Greenbush'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/>

8.5.11 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.

8.5.12 PLAN FOR EVACUATION NEEDS AND SHELTERING

The Town of East Greenbush has an emergency response plan¹⁰. It does not have a post-disaster recovery plan or a post-disaster recovery ordinance¹¹. Rensselaer County has an existing Comprehensive Emergency Management Plan (CEMP) documenting the County's plan for evacuation and sheltering measures during hazard events. The Plan is posted online at: <http://www.rensco.com/wp-content/uploads/2019/07/Rensselaer-County-CEMP.pdf>. As part of this hazard mitigation plan update, the Rensselaer County reviewed their existing CEMP and determined that updates were necessary at this time. Updates to the CEMP are being completed at this time. Once finalized and approved, the County will post the updated CEMP at the same address and will follow procedures in its updated CEMP in all future disasters. The County BPS indicated that there are no designated evacuation routes.

Appendix B contains updated shelter data provided by the Red Cross in 2018. Shelter locations are not made public until facilities are actually opened for an event and therefore, pages of Appendix B that include shelter information are nonpublic. Since every possible shelter is not opened during every event, the data is not made public in order to ensure that individuals in need of shelter do not seek it at facilities which may remain closed during a particular event. The Town of East Greenbush 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.

8.5.13 FUTURE NEEDS - RISK/VULNERABILITY

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

8.5.14 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 East Greenbush 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).

¹⁰ Source: Local Capability Assessment

¹¹ Source: Local Capability Assessment

Demonstration of Progress over the Last Planning Cycle (2011-2019) – The Town of East Greenbush 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.
- 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. We have involved the Building and Codes Department via meetings and email correspondence. The Building and Codes Department has provided input during our response to the worksheets.
- Community currently has a local zoning ordinance.]
- Revised capital or operating budgets to include a line item for mitigation project funding.
- 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). The Dept. has a regimented inspection program under which drainage ways are inspected annually. Cleaning occurs based upon the inspection results.
- Worked with Planning Department has added hazard vulnerability to subdivision and site plan review criteria. The Town's Subdivision Regulations set out requirements for providing information pertaining to and conducting evaluation of steep slopes, floodplains, and other natural features. The Regulations also reference the NFIP

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

- Issue a letter to each department head to solicit their support and explore opportunities for further integration of hazard mitigation into the daily activities of the community as a whole.
- Incorporate hazard mitigation for natural hazards in the next update of the master, general or comprehensive plan.
- Add a specific hazard mitigation element to the next update of the master, general or comprehensive plan.
- Adopt and enforce the minimum building standards established in the current State-adopted IBC (NY edition).
- Maintain community participation in FEMA's National Flood Insurance Program.
- Join (or continue to maintain participation in) the NFIP's Community Rating System.
- Steer growth and development away from high risk locations by using the risk

assessment from the hazard mitigation plan as a tool to monitor future updates of community land use plans, zoning and subdivision codes and the development review process.

- Modify work plans, policies or procedures to include hazard mitigation concepts/activities.
- Revise job descriptions to include mitigation-related duties to further institutionalize mitigation.
- Revise capital or operating budgets to include a line item for mitigation project funding.
- 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.
- 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.)

8.5.15 MITIGATION STRATEGY

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

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

8.5.15.1 Progress on 2011 HMP Initiatives

The following table was completed by the Town of East Greenbush 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.

The Town notes some changes to overall local priorities since 2011. A large pharmaceutical manufacturer has increased its footprint significantly in the Town and is constructing new facilities in formerly undeveloped areas of Town. Water quality and storm drainage have been a top priority for the Town during this process. The other significant change is that the Town has experienced an increase in residential development, with two developments under construction and three more in various stages of planning. These developments are being carefully reviewed to mitigate their impacts on the rest of the community but has increased the need for more drainage projects in neighborhoods downstream.

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	
EG-1	Upgrade culvert and swale drainage in Hampton Manor area of town in order to prevent flooding	High	Flooding	DPW, Town Board Budget Approval				X	Lack of Funding	X		Additional development in the area, the age and design of the drainage system, and the normal deterioration of existing culverts require the Town to develop a plan to mitigate this issue. The Town implemented water quality stormwater management improvements in this area in 2012 and intends to extend these modernizations to areas upstream with drainage issues.
EG-2	Recondition Dam at the end of Catskill Avenue in order to prevent flooding in neighboring City of Rensselaer.	Medium	Flooding	Engineer, DPW, Town Board Budget Approval				X	Lack of Funding	X		No change from 2011 Plan. Normal deterioration of dam has occurred.

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	
EG-3	Replace Mill Creek culvert pipe on Michaels Road with a bridge.	Medium	Flooding	Planning, DPW, Town Board Budget Approval				X	Lack of Funding	X		The portion of Mill Creek upstream of the culvert is flood prone (100-year floodplain). Urbanization along Mill Creek tributaries extending north to Upper Mannix Rd has occurred, increasing runoff. The immediate area has been the subject of several development proposals, and an option under consideration involves evaluation of upgrades as part of future land development application review. Implementation of identified improvements, including the culvert, could proceed as part of a mitigation plan for developing that area.
EG-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	High	All hazards	County-led action item. CPG Member, Town Supervisor				X	The Town is participating in the 2019 HMP update process. Lack of available staff and staff turnover have made this item incomplete. The Town will update its website with a link to the County web presence. This item is ongoing and, upon completion of this HMP update, the Town will begin to institutionalize an outreach program built around an updated factsheet as well as the Town's website.	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	
	other appropriate sources). (public education)											
EG-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.
EG-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 it carry it forward as well.
EG-CL-4	Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department (prevention)	High	All hazards	County-led action item. CPG Member, Town Supervisor			x		The Town has a comprehensive plan, which was last updated in 2006, which was a land use study update support a rezoning process. The Rensselaer County Bureau of Economic Development and Planning reviewed the plan as an advisory opinion.	x		County is carrying forward this County-led activity with no changes; our municipality will it carry it forward as well.
EG-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.

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	
EG-NFIP-4	Update/revise floodplain management ordinance to be consistent with potential future new FIRMs	Medium	Flooding	Building			x		FEMA has not issued new FIRMs since the last hazard mitigation plan was prepared in 2011.	x		Ongoing type of activity; will be carried forward with no changes.
EG-NFIP-6	Join the Community Rating System (CRS)	Medium	Flooding	Building				x	Municipality opted not to enter CRS.	x		Municipality intends to explore further during next planning cycle; carrying forward with no changes

8.5.15.2 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 East Greenbush, 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	Pointview Drive Drainage	Flooding	The west end of the Pointview Drive Development had no street drainage and homes were flooded during spring thaw and heavy rainstorms. The Town installed a closed drainage system with catch basins and sub-surface drainage.	Cost	\$20,000
				Level of Protection	Fifty Year Storm Event
				Damages Avoided; Evidence of Success	Flooding events on the lower levels of homes in the area have been virtually eliminated. Previously standing surface water issues are no longer evident.

8.5.15.3 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 East Greenbush are shown in the following table. These include both new initiatives and initiatives that were carried forward from the 2011 HMP.

PROPOSED 2019 HMP MITIGATION INITIATIVES														
Initiative Number	Initiative Name	HMP Goal(s)/ Objective(s) Being Met	Hazard(s) to be Mitigated	Description of the Problem	Description of the Solution	CF ¹² ?	EHP ¹³ Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁴	Priority ¹⁵	Action Worksheet Provided? ¹⁶
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
1	Upgrade Hampton Manor Drainage (2011 EG-1)	3,4	Flooding	The design of the stormwater collection system is outdated and does not adequately handle heavy storm events. Neighborhoods between the outlet of Hampton Manor Lake and the City of Rensselaer are at risk of flooding.	Install new drainage system capable of handling at least a 100 year rain event.	No	No	Two Years	Public Works Commissioner, Town Board	\$1,000,000	Reduce or eliminate property damage	FEMA, Local	1	Y
2	Recondition Catskill Avenue Dam (2011 EG-2)	3,4	Flooding	The dam in question is deteriorating at a normal rate and should be reconditioned or replaced as necessary. This dam retains water from the Hampton Manor Lake and its failure could result in significant property damage in the City of Rensselaer.	Recondition or replace as necessary	No	No	One Year	Public Works Commissioner, Town Board	\$750,000	Reduce or eliminate property damage	Local	5	N
3	Michael Road Pipe Arch Replacement (2011 EG-3)	3,4	Flooding	The pipe-arch currently installed in that location has flooded at least three times over the last twenty years resulting in road closures and damage to the roadway.	Replace Culvert Pipe on Michael Road with a hydraulically adequate structure	No	No	Two Years	Public Works Commissioner	\$1,000,000	Eliminate Property Damage	FEMA, Private	4	N
4	Sherwood Park Drainage *NEW*	3,4	Flooding	Sherwood Park is an older development that has been partially retrofitted with a storm drainage system. The system is not adequate for increasingly frequent heavy rain events	Design and build a storm drain system capable of handling at least a 100 year rain event.	No	No	Two Years	Public Works Commissioner	\$700,000	Reduce or eliminate property damage to neighboring homes	FEMA, Local	3	N
5	Prospect Heights Drainage *NEW*	3,4	Flooding	Prospect Heights is an older development that has been partially retrofitted with a storm drainage system. The system is not adequate for increasingly frequent heavy rain events	Design and build a storm drain system capable of handling at least a 100 year rain event.	No	No	Two Years	Public Works Commissioner	\$900,000	Reduce or eliminate property damage to neighboring homes	FEMA, Local	2	Y

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

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

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

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

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

PROPOSED 2019 HMP MITIGATION INITIATIVES														
Initiative Number	Initiative Name	HMP Goal(s)/ Objective(s) Being Met	Hazard(s) to be Mitigated	Description of the Problem	Description of the Solution	CF ¹² ?	EHP ¹³ Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁴	Priority ¹⁵	Action Worksheet Provided? ¹⁶
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
6	Participate in County-Led Hazard Mitigation Outreach (2011 EG CL-1)	1	All Hazards	Lack of Public Awareness of Hazards and methods to address	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/County-led initiative	County-led action item. Core Planning Group (CPG) Member, Town Supervisor	Low	High	Staff time and/or local budget	High	N
7	Request code/ordinance review by County as needed (2011 EG CL-2)	4	All Hazards	The Town should incorporate, to the maximum extent practical, strategies, practices, and legal or regulatory frameworks to address hazards identified in the Plan. The Town's local laws should be brought into alignment with the updated plan, as applicable.	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/County-led initiative; Estimated three years to complete as part of the Town's Comp Plan Update project; estimated one year timeframe to commence	County-led action item. CPG Member, Director of Planning and Zoning, Town Supervisor	Low	Medium	Staff time and/or local budget	Medium	N
8	Send CEO to County-Led Training (2011 EG CL-3)	2	All hazards	Building construction and other land use changes must be in accordance with applicable NYS and Local Building Codes, requiring training to apply and enforce these codes.	Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training. (prevention)	No	No	Ongoing/County-led initiative	County-led action item. CPG Member, Code Enforcement Officer, Town Supervisor	Low	High	Staff time and/or local budget	Medium	N
9	Send Comprehensive Plan Update to County for Review by County Planning (2011 EG CL-4)	2,3,4	All hazards	The Town's Comprehensive Plan guides development and investment and is a framework to address multiple issues. Unless, hazard mitigation is integrated into the Comprehensive Plan, as appropriate, gaps relative to hazard mitigation in land use regulation, investment, and other actions identified in the plan will be created.	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/County-led; Estimated three years to complete as part of the Town's Comp Plan Update project – Town review has commenced	County-led action item. CPG Member, Director of Planning and Zoning, Town Supervisor	Low	High	County Budget, Local Staff Time, Local Budget	High	N

PROPOSED 2019 HMP MITIGATION INITIATIVES														
Initiative Number	Initiative Name	HMP Goal(s)/ Objective(s) Being Met	Hazard(s) to be Mitigated	Description of the Problem	Description of the Solution	CF ¹² ?	EHP ¹³ Issues?	Estimated Timeline	Project Lead (include relevant Department and Position Title)	Estimated Costs	Estimated Benefits	Potential Funding Sources ¹⁴	Priority ¹⁵	Action Worksheet Provided? ¹⁶
* NOTE: Projects related to Critical Facilities (CF) must protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
10	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 EG CL-5)	2,4	All hazards	New issues arise relating to natural hazards and hazard mitigation can arise upon completion of this Plan. Issues identified in the Plan can also require and benefit from additional discussion and expert input. Local needs can require tailored strategies to address these issues.	Hold periodic workshops for municipalities regarding zoning and planning issues that arise regarding natural hazards and hazard mitigation. (prevention)	No	No	Ongoing/County-led	County-led action item. CPG Member, Town Supervisor	Low	Low	County Budget, Local Staff Time	Low	N
11	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 EG-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 with any issuance of new FIRMs by FEMA	Town Board and Floodplain Manager	Low	High	Local staff time	Low	N
12	Join FEMA's CRS (2011 EG-NFIP-6)	2	Flooding	Flood insurance policies are expensive. East Greenbush has 21 flood insurance policies.	Join the Community Rating System (CRS) – as the Town moves up in Class, policyholders receive premium reductions on their policies	No	No	2020	Board of Trustees and Floodplain Manager	Low- staff time	High	Local staff time	Low	N

Prioritization Methodology for Proposed 2019 HMP Mitigation Initiatives

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

PRIORITIZATION METHODOLOGY FOR PROPOSED 2019 HMP MITIGATION INITIATIVES														
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?	Priority
1	Upgrade Hampton Manor Drainage (2011 EG-1)	Flooding	H	H	H	M	H	M	L	L	L	L	L	1
2	Recondition Catskill Avenue Dam (2011 EG-2)	Flooding	M	L	L	M	L	L	L	L	L	L	L	5
3	Michael Road Pipe Arch Replacement (2011 EG-3)	Flooding	H	M	M	M	L	L	M	L	L	L	L	4
4	Sherwood Park Drainage *NEW*	Flooding	H	M	M	M	M	H	L	L	L	L	L	3
5	Prospect Heights Drainage *NEW*	Flooding	H	M	H	M	H	M	L	L	L	L	L	2
6	Participate in County-Led Hazard Mitigation Outreach (2011 EG CL-1)	All Hazards	L	M	H	M	H	L	L	L	L	L	L	12
7	Request code/ordinance review by County as needed (2011 EG CL-2)	All Hazards	L	M	M	L	H	L	L	M	L	L	L	9
8	Send CEO to County-Led Training (2011 EG CL-3)	All hazards	M	M	H	M	M	L	L	L	L	L	L	8
9	Send Comprehensive Plan Update to County for Review by County Planning (2011 EG CL-4)	All hazards	L	M	H	L	H	M	M	L	L	L	L	7
10	Attend County-Led Workshops on Natural Hazards and Hazard Mitigation (2011 EG CL-5)	All hazards	L	L	M	M	L	L	L	L	L	L	L	10
11	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 EG-NFIP-4)	Flooding	M	M	H	M	M	M	L	L	L	L	L	6
12	Join FEMA's CRS (2011 EG-NFIP-6)	Flooding	M	M	M	M	M	M	L	L	L	L	L	11

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 East Greenbush are included on the following pages.

Section 8.5 - Jurisdictional Annex, Town of East Greenbush

NYS DHSES Action Worksheet			
Project Name:	Comprehensive Plan Update		
Project Number:	1		
Risk / Vulnerability			
Hazard of Concern:	All		
Description of the Problem:	Existing plan doesn't tie in hazard mitigation plan		
Action or Project Intended for Implementation			
Description of the Solution:	Integrate hazard mitigation plan into the comprehensive plan update		
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:	n/a	Estimated Benefits (losses avoided):	High- planning for the future taking into account natural hazards
Useful Life:	n/a		
Estimated Cost:	Staff time only		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2019
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Local budget
Responsible Party: (Department/ Organization)	Supervisor	Local Planning Mechanisms to be Used in Implementation, if any:	Comprehensive plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action – leave comprehensive plan as is	\$0 staff time only	Not viable- Leaving the plan as is means that plan is outdated and does not provide for resiliency or a vision that incorporates natural hazards or hazard mitigation
	Update the comprehensive plan, but don't integrate the hazard mitigation plan	\$0 staff time only	Not viable- updating the plan without incorporating the mitigation plan makes the mitigation planning effort in vain and doesn't provide for resiliency
	Update the comprehensive plan, and integrate the hazard mitigation plan	\$0 staff time only	Best solution- the two go hand in hand. This will ensure that the town reduces future risks from natural hazards by sound decisions made at the planning stage
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 8.5 - Jurisdictional Annex, Town of East Greenbush

NYS DHSES Action Worksheet			
Project Name:	Land Use Ordinance Update		
Project Number:	2		
Risk / Vulnerability			
Hazard of Concern:	All		
Description of the Problem:	Existing ordinance doesn't tie in hazard mitigation plan		
Action or Project Intended for Implementation			
Description of the Solution:	Integrate hazard mitigation plan into the land use ordinance update		
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:	n/a	Estimated Benefits (losses avoided):	High- planning for the future taking into account natural hazards
Useful Life:	n/a		
Estimated Cost:	Staff time only		
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2019
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	Local budget
Responsible Party: (Department/ Organization)	Supervisor	Local Planning Mechanisms to be Used in Implementation, if any:	Land use ordinance
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action- leave ordinance as is	\$0 staff time only	Not viable- Leaving the ordinance as is means ordinance is outdated and does not provide for resiliency or a vision that incorporates natural hazards or hazard mitigation
	Update the ordinance, but don't integrate the hazard mitigation plan	\$0 staff time only	Not viable- updating the plan without incorporating the mitigation plan makes the mitigation planning effort in vain and doesn't provide for resiliency
	Update the ordinance, but don't integrate the hazard mitigation plan	\$0 staff time only	Best solution- the two go hand in hand. This will ensure that the town reduces future risks from natural hazards by sound decisions made at the planning stage
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:			