

9.14 TOWN OF LEDYARD

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

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
<p>Name: Mark B. Jordan, Supervisor Address: 1099 Poplar Ridge Rd., Aurora, NY 13026 Phone Number: 315-364-5707 Fax Number: 315-364-5711 Email address: ledyard@hughes.net</p>	<p>Name: James Bailey, Highway Supervisor Address: 1099 Poplar Ridge Rd., Aurora, NY 13026 Phone Number: 315-364-5549 Fax Number: 315-364-5711 Email address: ledyard@hughes.net</p>

B.) PROFILE

Population

According to the 2010 U.S. Census, the estimated Town of Ledyard population was 1,886. The Town of Ledyard is one of the 23 towns in Cayuga County.

Location

The Town of Ledyard is located in the southwestern corner of Cayuga County, with the towns of Springport to its north, Scipio to the northeast, Venice to the southeast, and Genoa to the south. It shares its western border with Seneca County, separated by Cayuga Lake which lies in between the two counties. The Village of Aurora is located in the center of the town on the western shore.

Brief History

Like many other Cayuga County towns, a portion of Ledyard’s land area was once part of the Central New York Military Tract. At that time, however, the northern part of the town was designated as reservation land for the Cayuga tribe native to the area. The first settlers arrived in the area no known as Ledyard around 1789. It was not until 1823, and a split from the Town of Scipio, that the Town of Ledyard was founded (Town of Ledyard, Date Unknown).

Governing Body Format

Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Along with town and village roads, any public water and sewer systems are operated by the local municipality, though they may cooperate with County departments. Each municipality has charge over its own planning and zoning and uses the County personnel as a resource (Cayuga County, 2010).

Growth/Development Trends

The jurisdiction noted that there is no major residential/commercial development or major infrastructure development that has been identified for the next five (5) years in the municipality.

C.) NATURAL HAZARD EVENT HISTORY

Cayuga County has a history of natural hazard events as detailed in Volume I, Section 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events affecting the County and its municipalities. Below is presented a summary of historical events to indicate the range and impact of natural hazard events in the County. Specific damages have been indicated if available from reference or local sources.

Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Flood in Moravia			6/1/1905	Severely damaged Moravia business district
Steamship Frontenac fire south of Union Springs			6/27/1907	8 deaths
Severe Flooding along Cayuga Lake			4/1916	
Spanish Influenza			1918 — 1919	nearly 100 deaths in Cayuga County
Riots at Auburn Prison			1929	11 deaths, 3 firefighters injured
Hislops fire in Auburn			12/1931	Destroyed a block of downtown, 1 firefighter killed
Floods in Moravia & Locke			7/1/1935	Floods in Moravia & Locke
Gasoline leak & explosion in Auburn			3/30/1960	Killed 5 including 3 firefighters
Gasoline spill in Auburn			9/ 1960	17,000 gallon gasoline spill at Drake Oil
Gasoline spill			5/1966	8,500 gallon gasoline spill at Sinclair bulk terminal in Auburn
Dutch Elm Disease			1960's	Kills thousands of trees in City and Villages
Tropical Storm Agnes	DR-338	Y – IA, PA	6/1972	Auburn's Mill Street dam washed out, Owasco Lake dam weakened, Cayuga Lake rises 1.25 feet higher than 1916 level
High Winds/Wave Action/Flooding	DR-367	Yes - IA, PA	3/21/1973	
Gasoline tanker crash			4/10/1975	Resulting fire destroys 11 buildings in Locke
Hurricane Eloise /Severe Storm, Heavy Rain, Landslide/Flooding	DR-487	Yes - IA, PA	9/1975	Caused severe damage in Moravia and Locke
10,000 gallon gasoline spill at Agway in Auburn			9/11/1977	
Ice Jam in Port Byron			2/1979	Evacuated homes and closes schools
Flooding in Moravia			10/1981	"worse than Agnes or Eloise"

SECTION 9.14: TOWN OF LEDYARD

Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
and Locke				
Radiation incident at Austeel (dental scrap)			1980's	
Blizzard followed by lake and river flooding in April	EM-3107	Yes - PA	3/17/1993	Blizzard followed by lake and river flooding in April
Dunn & McCarthy fire in Auburn.			11/1993	
Ice jam flooding in Port Byron			1/ 1994	Evacuated homes and closes schools.
County-wide flooding	DR-1095	Yes - IA, PA	1/19/1996	1 death (MVA)
Street flooding in Moravia and Locke	DR-1148	No	11/1996	
Tornado(s) in Niles and Moravia	DR-1222 DR-1233	No	Summer 1998	
Labor Day storm.	DR-1244	Yes - IA, PA	9/1998	
USDA declared Drought (t40329).			8/1999	Genoa issues Emergency water restrictions
Road flooding in King Ferry		No	6/2000	(Fed. Declared disaster elsewhere).
Flood			5/2002	Road flooding in Union Springs and Meridian.
Landslide along Seneca River near Cross Lake in Town of Cato.			2/2003	
Ice storm	DR-1467	Yes - IA, PA	4/2003	3 deaths in Cayuga County.
NE blackout.	EM-3186	Yes - PA	8/23/2003	
Snow emergency declared	EM-3195	Yes - PA	1/2004	
Rain/Flooding	DR-1589	Yes - PA	4/2005	Flooding triggered by snow melt and rain.
Severe Storms and Flooding	DR 1650	No	June 26 2006 —July 1, 2006	
Severe Storms and Flooding	DR 1670	No	November 16-17, 2006	
April Nor'easter	DR 1692	No	April 18, 2007	
Severe Storms and Flooding	DR 1710	No	June 19, 2007	
Severe Storms and Flooding	DR 1857	No	August 9, 2009	
Severe Storms and Flooding	DR 1993	No	April 26, 2011— May 8, 2011	
Severe Storms and	EM 3328	No	August 26,	



Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Flooding			2011	
Hurricane Irene	DR 4020	No	August 26, 2011—September 5, 2011	
Severe Storms, Flooding, Tornadoes, and Straightline Winds	EM 3341	No	September 7-8, 2011	
Remnants of Tropical Storm Ilee	DR 4031	No	September 7-11, 2011	

Note: N/A = Not applicable

D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Flood	1% Annual Chance: \$148,186 0.2% Annual Chance: \$204,573	Frequent	18	Medium
Severe Storm	100-Year MRP: \$0 500-Year MRP: \$364 Annualized Loss: \$179	Frequent	18	Medium
Severe Winter Storm	1% of GBS: \$754,995 5% of GBS: \$3,774,973	Frequent	48	High
Transportation	Not available	Rare	6	Low
Ground Failure	Karst Exposure \$28,860,635 Moderate Incidence \$0 Moderate Susceptibility \$0	Occasional	12	Low

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. High = Total hazard priority risk ranking score of 30 and above
Medium = Total hazard priority risk ranking of 15-29
Low = Total hazard risk ranking below 15
- c. The valuation of general building stock and loss estimates was based on custom inventory for Cayuga County.
- d. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- e. Loss estimates for the flood hazard represents both structure and contents.

E.) CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

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

No information at this time.

E.1) 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)
1) Building Code	Y	Brian Hicks, Zoning/ Code Enforcement Officer	
2) Zoning Ordinance	Y	Brian Hicks, Zoning/ Code Enforcement Officer; Bruck Mosher, Zoning Board of Appeals Chairman	
3) Subdivision Ordinance	Y	Brian Hicks, Zoning/ Code Enforcement Officer	
4) NFIP Flood Damage Prevention Ordinance	Y	Brian Hicks, Zoning/ Code Enforcement Officer	
4a) Cumulative Substantial Damages			
4b) Freeboard			
5) Growth Management			
6) Floodplain Management / Basin Plan			
7) Stormwater Management Plan/Ordinance			
8) Comprehensive Plan / Master Plan/ General Plan			
9) Capital Improvements Plan			
10) Site Plan Review Requirements	Y	Brian Hicks, Zoning/ Code Enforcement Officer	
11) Open Space Plan			
12) Stream Corridor Management Plan			
13) Watershed Management or Protection Plan			
14) Economic Development Plan			
15) Comprehensive Emergency Management Plan			
16) Emergency Response Plan			
17) Post Disaster Recovery Plan			
18) Post Disaster Recovery Ordinance			
19) Real Estate Disclosure Requirement	Y	State	State Requirement
20) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]			

E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/ Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Brian Hicks, Zoning/ Code Enforcement Officer; Ronald Buxenbaum; Planning Board Chairman
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure		
3) Planners or engineers with an understanding of natural hazards		
4) NFIP Floodplain Administrator		
5) Surveyor(s)		
6) Personnel skilled or trained in "GIS" applications		
7) Scientist familiar with natural hazards		
8) Emergency Manager		
9) Grant Writer(s)		
10) Staff with expertise or training in benefit/cost analysis		

E.3) Fiscal Capability

Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
1) Community Development Block Grants (CDBG)	Unknown
2) Capital Improvements Project Funding	Unknown
3) Authority to Levy Taxes for specific purposes	Unknown
4) User fees for water, sewer, gas or electric service	Unknown
5) Impact Fees for homebuyers or developers of new development/homes	Unknown
6) Incur debt through general obligation bonds	Unknown
7) Incur debt through special tax bonds	Unknown
8) Incur debt through private activity bonds	Unknown
9) Withhold public expenditures in hazard-prone areas	Unknown
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	Unknown
11) Other	

E.4) Community Classifications

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

N/A = Not applicable. NP = Not participating. - = Unavailable.

The classifications listed above relate to the community's effectiveness in providing services that may impact 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 one (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 1000 feet of a creditable fire hydrant and is within 5 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/>

F. MITIGATION STRATEGY

F.1) Past Mitigation Actions/Status

The jurisdiction has indicated that no mitigation actions have been incorporated into its planning and land use mechanisms.

F.2) Hazard Vulnerabilities Identified

The jurisdiction did not identify any specific hazard problems/problem areas within the community where it has suffered damages or losses to natural hazards.

The Cayuga County Soil and Water Conservation District (SWCD) has identified the following vulnerabilities for the Town of Ledyard, and has proposed hazard mitigation initiatives corresponding to these vulnerabilities, as shown in Section F.3 of this annex:

- Cayuga Lake is a major Finger Lake located partially within Cayuga County. Land use in the area includes residential areas and agriculture. Erosion on the lakeshore has been of concern in the

past. In the event of a major storm, water levels could rise above normal stages and threaten lakeshore properties and homes. Recreation areas, steep slopes and certain beaches on parts of the lake may require stabilization. Areas along the lakeshore are also prone to flooding and damage resulting from ice jams where tributaries enter the lake. Unnamed and named watercourses, including Paines Creek, Great Gully Creek and others, contribute a large volume of sediment to the lake as a result of bank erosion. The Cayuga County SWCD has worked on many such projects on the lake in the past.

- Great Gully Creek, a watercourse that flows to Cayuga Lake, has steeply sloped banks and runs through residential and agricultural areas. . After heavy rainfall events, the swell of the stream erodes the banks and causes significant damage. As the banks deteriorate, cropland is lost and property along the creek is endangered. Streambank erosion is a primary concern, particularly during heavy rain events or during the spring melt.
- Paines Creek, a watercourse that flows to Cayuga Lake, has steeply sloped banks and runs through residential and agricultural areas. After heavy rainfall events, the swell of the stream erodes the banks and causes significant damage. Significant sediment deposits have been noted in Cayuga Lake from this stream. As the banks deteriorate, cropland is lost and property along the creek is endangered. Streambank erosion is a primary concern, particularly during heavy rain events or during the spring melt.

• NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)	# Policies in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Ledyard (T)	18	11	\$43,078	1	0	3	0	15

Source:

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, in June 2012 using the “Comm_Name”. These statistics are current as of June, 2012. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.
- (2) Total building and content losses from the claims file provided by FEMA Region 2 (current as of June, 2012).
- (3) The policy locations used are based on the latitude and longitude provided by FEMA Region 2.

It is estimated that in the Town of Ledyard, 47 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 26.5% is located within the 1% annual chance flood area. \$1,801,050 (1.5%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area. There are 18 NFIP policies in the community and there are 3 policies located within the 1% annual chance flood area. FEMA has identified 1 Repetitive Loss (RL) including 0 Severe Repetitive Loss (SRL) properties in the municipality.

HAZUS-MH estimates that for a 1% annual chance flood, \$148,186 (0.1%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged and 878 tons of debris could be generated. HAZUS-MH estimates the following damage and loss of use to critical facilities in the community as a result of a 1% annual chance flood event:

Critical Facilities Located in the 1-Percent and 0.2-Percent Annual Chance Flood Boundaries and Estimated Potential Damage

Name	Municipality	Type	Exposure		Potential Loss from 1% Flood Event (2)	Potential Loss from 0.2% Flood Event (2)
			1% Zone	0.2% Zone		
Treatment Plant	Ledyard (T)	Potable Water	X			
Intake	Ledyard (T)	Potable Water	X			

Source: HAZUS-MH 2.1

Note: C = City; NA = Not available; T = Town; V = Village

X = Facility located within the DFIRM boundary.

(1) HAZUS-MH 2.1 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.1 User Manual).

(2) In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type. The flood model does not estimate damages for HAZMAT facilities.

Please refer to the Hazard Profiles for additional vulnerability information relevant to this jurisdiction.

F.3) PROPOSED HAZARD MITIGATION INITIATIVES

Note some of the identified mitigation initiatives in Table F are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
LY-1	The Cayuga SWCD proposes to complete bank stabilization along the Cayuga Lake lakeshore and nearby tributaries as needed.	Existing	Flood	4-1 4-2 4-3 4-4	Cayuga SWCD; NYSDEC; USACE;	High	High	HMA Grants, State, County and local funding	On-going DOF	Medium	NR
LY-2	The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Great Gully Creek watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake.	Existing	Flood	4-1 4-2 4-3 4-4	Cayuga SWCD; NYSDEC; USACE;	High	High	HMA Grants, State, County and local funding	On-going DOF	Medium	NR
LY-3	The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Paines Creek watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be	Existing	Flood	4-1 4-2 4-3 4-4	Cayuga SWCD; NYSDEC; USACE;	High	High	HMA Grants, State, County and local funding	On-going DOF	Medium	NR



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake. Turbidity has been an issue in for some of the village water treatment systems that draw public water from the lake, so a reduction of sediments would benefit those systems as well.										
LY-4	<p>Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:</p> <ul style="list-style-type: none"> • Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. • Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. • Use email notification systems and newsletters to better educate the public on flood insurance, the availability 	N/A	All Hazards	2-1 2-2 2-3 2-4 2-5	Municipality with support from Planning Partners, County Planning, NYSOEM, FEMA	Medium	Medium	Municipal Budget, HMA programs with local or county match	Short Term	High	PE



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	of mitigation grant funding, and personal natural hazard risk reduction measures. <ul style="list-style-type: none"> Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. 										
LY-5	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas, specifically as identified in Section I.	N/A	All Hazards	1-6 4-3	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	PR
LY-6	Improve communication systems.	N/A	All Hazards	3-3 3-7	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	ES PR
LY-7	Develop programs/procedures to capture and archive loss data from events. Examples include: <ul style="list-style-type: none"> Record location and length of roadway closures; Develop a database of residential and commercial property damage, including permit history for such repairs; High water marks, perhaps painting phone poles with high water marks and or regulatory Base Flood Elevations (BFEs). 	N/A	All Hazards	1-3 1-4	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	PR
LY-8	Obtain and install backup power sources at critical facilities.	N/A	All Hazards	3-3 3-5	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	ES



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
LY-9	<p>Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including:</p> <ul style="list-style-type: none"> • Support the performance of enhanced risk and vulnerability assessments for hazards of concern. • Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. <p>Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the</p>	N/A	All Hazards	1-1 1-3 1-4	Hazard Mitigation Plan Coordinator	Medium-High	Medium-High	FEMA Mitigation Grant Programs with local match	Long Term DOF	Medium	PR



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	county, state and/or federal level.										
LY-10	Support ongoing updates of Comprehensive Emergency Management Plans	New and Existing	All Hazards	1-6	Municipality with support from County Emergency Management	Low	Low	Municipal Budget	On-going	High	PR
LY-11	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	N/A	All Hazards	3-2 3-5 3-6 3-7	Municipality with support from County, NYSOEM, FEMA and surrounding communities	Medium	Low	Municipal Budget	Short Term	High	PR, ES
LY-12	Identify and develop agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping	N/A	All Hazards	3-7	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short Term	Medium	PR, ES
LY-13	Work with regional agencies (i.e. County and NYSOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	N/A	All Hazards	3-6 3-7	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget, FEMA HMA and HLS grant programs	Short-Long Term DOF	Medium	PR
LY-14	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New and Existing	All Hazards	3-1 3-5	Municipality with support from Planning Partners, County Planning, NYSOEM, FEMA	High	Low – High (for 5 year update)	Municipal Budget, FEMA planning grants	On-going	High	PR
LY-15	Purchase, relocate, or elevate structures located in hazard-prone areas to protect	Existing	Flood, Severe Storm	1-2 4-2	Municipality (via Municipal Engineer/NFIP)	High	High	FEMA Mitigation Grants	Long Term DOF	Medium	PP



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	<p>structures from future damage, with repetitive loss and severe repetitive loss property as priority.</p> <p>Phase 1: Identify appropriate candidates based on cost-effectiveness, for example: treatment plant and intake facility.</p> <p>Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability</p>				Floodplain Administrator) with support from County Planning, NYSOEM, FEMA						
LY-16	<p>Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.</p> <p>Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives below.</p>	N/A	Flood, Severe Storm	1-4 1-6 1-7 4-3	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	High	Low-Medium	Municipal Budget	Ongoing	High	PR, PE
LY-17	Obtain and archive elevation certificates	N/A	Flood, Severe Storm	1-4 1-6	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	On-going	High	PR
LY-18	Promote the participation of Floodplain Administrators within the planning process and other activities.	N/A	Flood	1-4 1-7	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	PR
LY-19	Enhance the County/community resilience	N/A	Severe Storm	1-4 1-6	Municipality with support	Medium	Low	Municipal Budget	Short Term	Medium	PE



SECTION 9.14: TOWN OF LEDYARD

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.			2-2	from County, NYSOEM and FEMA				DOF		
LY-20	Adopt regulations for undergrounding utilities in new developments.	N/A	Severe Storm	1-6 3-1	Municipal Council	Medium	Low	Municipal Budget	Short	H	PR
LY-21	Implement permit fee waivers for installation of backup power for private property.	N/A	Severe Storm	2-4 2-5	Municipal Council	Medium	Low	Municipal Budget	Short	H	PR
LY-22	Provide public education and outreach on proper installation and/or use of backup power	N/A	Severe Storm	2-1 2-2	Municipal Clerk	Medium	Low	Municipal Budget	Short	H	PR
LY-23	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	N/A	Severe Storm	1-6 4-3	Municipal Code Enforcement	Medium	Low	Municipal Budget	Short	H	PR

Notes:

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (NA) is inserted if this does not apply.

Acronyms and Abbreviations:

ARC	American Red Cross
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
HMA	Hazard Mitigation Assistance
HMP	Hazard Mitigation Proposal
N/A	Not applicable
NFIP	National Flood Insurance Program
NYSOEM	New York State Office of Emergency Management
NOAA	National Oceanic and Atmospheric Administration
SWCD	Cayuga County Soil and Water Conservation District
USACE	U.S Army Corp of Engineers
USGS	U.S. Geological Survey

Costs:

Where actual project costs have been reasonably estimated:

Low = < \$10,000

Medium = \$10,000 to \$100,000

High = > \$100,000



Where actual project costs cannot reasonably be established at this time:

Low = Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.

Medium = Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.

High = Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low = < \$10,000

Medium = \$10,000 to \$100,000

High = > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low = Long term benefits of the project are difficult to quantify in the short term.

Medium = Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.

High = Project will have an immediate impact on the reduction of risk exposure to life and property.

Potential FEMA HMA Funding Sources:

PDM = Pre-Disaster Mitigation Grant Program

FMA = Flood Mitigation Assistance Grant Program

RFC = Repetitive Flood Claims Grant Program

SRL = Severe Repetitive Loss Grant Program

HMGP = Hazard Mitigation Grant Program

Timeline:

Short = 1 to 5 years. Long Term = 5 years or greater. OG = On-going program.

DOF = Depending on funding.

Notes (for Mitigation Type):

1. PR=Prevention: Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built Examples of these are acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
2. PP= Property Protection: These actions also include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
3. PE=Public Education and Awareness: Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
4. NR=Natural Resource Protection: Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. SP=Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
6. ES=Emergency Services: Actions that protect people and property, during and immediately following, a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

G.) PRIORITIZATION OF MITIGATION INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
LY-1	4	H	H	Y	Y	N	M
LY-2	4	H	H	Y	Y	N	M
LY-3	4	H	H	Y	Y	N	M
LY-4	5	M	M	Y	Y	N	H
LY-5	2	M	M	Y	Y	Y	M
LY-6	2	M	M	Y	Y	Y	M
LY-7	2	M	M	Y	Y	Y	M
LY-8	2	M	M	Y	Y	Y	M
LY-9	3	M	M	Y	Y	N	M
LY-10	1	L	L	Y	N	Y	H
LY-11	4	M	L	Y	N	Y	H
LY-12	1	M	M	Y	N	Y	M
LY-13	2	M	M	Y	Y	N	M
LY-14	2	H	L	Y	Y	N	H
LY-15	2	H	H	Y	Y	N	M
LY-16	4	H	L	Y	N	Y	H
LY-17	2	M	L	Y	N	Y	H
LY-18	2	M	M	Y	N	Y	M
LY-19	3	M	L	Y	N	Y	M
LY-20	2	M	L	Y	N	Y	H
LY-21	2	M	L	Y	N	Y	H
LY-22	2	M	L	Y	N	Y	H
LY-23	2	M	L	Y	N	Y	H

Notes: H = High. L = Low. M = Medium. N = No. N/A = Not applicable. Y = Yes.

Explanation of Priorities

High Priority = A project that meets multiple objectives (i.e., multiple hazards), benefits exceeds cost, has funding secured or is an on-going project and project meets eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation Grant Program (PDM) programs. High priority projects can be completed in the short term (1 to 5 years).

Medium Priority = A project that meets goals and objectives, benefits exceeds costs, funding has not been secured but project is grant eligible under, HMGP, PDM or other grant programs. Project can be completed in the short term, once funding is completed. Medium priority projects will become high priority projects once funding is secured.

Low Priority = Any project that will mitigate the risk of a hazard, benefits do not exceed the costs or are difficult to quantify, funding has not been secured and project is not eligible for HMGP or PDM grant funding, and time line for completion is considered long term (1 to 10 years). Low priority projects may be eligible other sources of grant funding from other programs. A low priority project could become a high priority project once funding is secured as long as it could be completed in the short term.

Prioritization of initiatives was based on above definitions: Yes

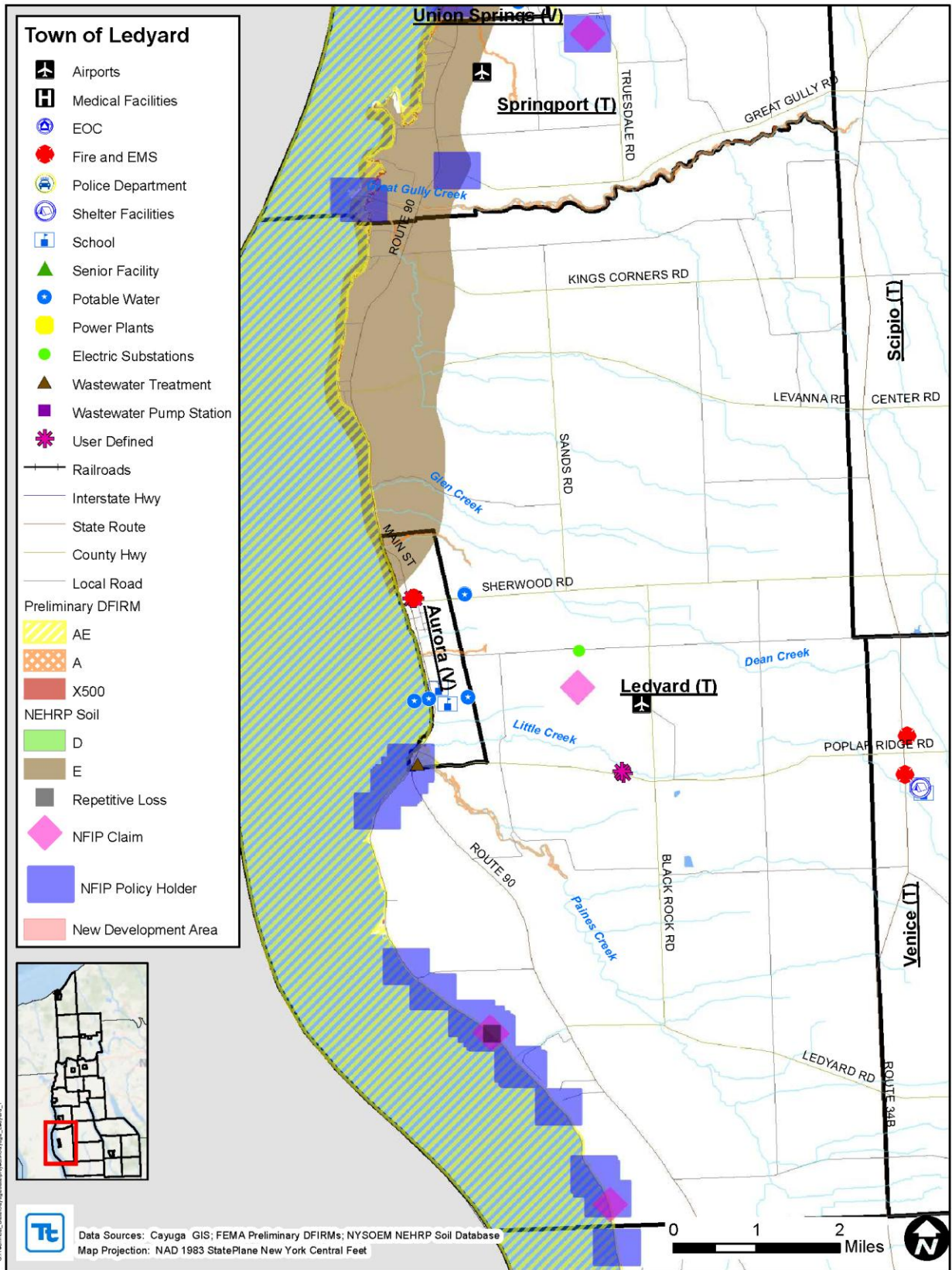
Prioritization of initiatives was based on parameters other than stated above: Not applicable.

H.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

No information at this time.

I.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been generated for the jurisdiction to illustrate the probable areas impacted within the municipality and is provided on the next page. This map is based on the best available data at the time of the preparation of this Plan, and is considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the jurisdiction has significant exposure. The Planning Area maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.



S:\Technical_Databases\GIS\MapServer\Projects\Cayuga_Ledyard_T



J.) ADDITIONAL COMMENTS

No additional comments at this time.

K.) NFIP ADMINISTRATOR INPUT

1. Planning and Regulatory

The Town of Ledyard joined the NFIP on February 6, 1984, and is currently an active member of the NFIP. Flood Insurance Rate Maps have been in effect for the community since August 2, 2007.

2. Administrative and Technical Staff

The Town of Ledyard has no dedicated staff or personnel to manage and uphold the Town of Ledyard's compliance with the NFIP.

3. Financial

As of May, 2013, there are 19 policies enforced, and a total of 17 insurance claims have been reported within the Town of Ledyard. As of June, 2012 there has been one repetitive loss property and zero severe repetitive loss properties within the Town of Ledyard.

4. Educational

None at this time.

5. Actions to Strengthen the Program

None at this time.