

## 9.20 VILLAGE OF MORAVIA

This section presents the jurisdictional annex for the Village of Moravia.

### A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
<a href="#">Name: Anne Riddell , Village Clerk</a> <a href="#">Address: P.O. Box 711, Moravia, NY 13118</a> <a href="#">Phone Number: 315-497-1820</a> <a href="#">Fax Number: 315-497-0069</a> <a href="#">Email address: villageofmoravia@scccinternet.com</a>	<a href="#">Name: Gary Mulvaney , Mayor</a> <a href="#">Address: P.O. Box 711, Moravia, NY 13118</a> <a href="#">Phone Number: 315-497-1820</a> <a href="#">Fax Number: 315-497-0069</a> <a href="#">Email address: villageofmoravia@scccinternet.com</a>

### B.) PROFILE

#### Population

According to the 2010 U.S. Census, the estimated Village of Moravia population was 1,282. The Village of Moravia is one of the 9 villages in Cayuga County.

#### Location

The Village of Moravia is located at the south town line of the Town of Moravia, south of Owasco Lake.

#### Brief History

The Village of Moravia was the site of a native village before being settled as part of the Central New York Military Tract. The first settlers arrived around 1789, while the land was still part of Onondaga County and was referred to as the Owasco Flats. Cayuga County was formed in 1799, and that same year the Town of Sempronius was established to include the land of present-day Moravia. The Town of Moravia was set apart from Sempronius in 1833, and incorporated as an independent town in 1837. The Village of Moravia was incorporated in 1837 and re-incorporated in 1859 when enlarged (Scarry, 2008).

#### 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. The Villages all have a Village Mayor, Clerk, and Village Board. 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 Cayuga 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. Growth is limited by available space and flood zones.

## 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 Cayuga County and its municipalities. Below is presented a summary of historical events to indicate the range and impact of natural hazard events in Cayuga 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

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Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
				schools
Flooding in Moravia and Locke			10/1981	"worse than Agnes or Eloise"
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	

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Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Severe Storms and Flooding	EM 3328	No	August 26, 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 <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Flood	1% Annual Chance: \$5,027,030 0.2% Annual Chance: \$7,881,622	Frequent	48	High
Severe Storm	100-Year MRP: \$0 500-Year MRP: \$95 Annualized Loss: \$66	Frequent	18	Medium
Severe Winter Storm	1% of GBS: \$633,029 5% of GBS: \$3,165,143	Frequent	48	High
Transportation	Not available	Rare	6	Low
Ground Failure	Karst Exposure \$0 Moderate Incidence \$0 Moderate Susceptibility \$0	Rare	6	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.

The village indicates that it has limited fiscal, and moderate regulatory, administrative, technical, community resiliency, and community political capability; with a moderately willing political capability to enact policies or programs to reduce hazard vulnerabilities in the community.

## 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	CEO	1/2007
2) Zoning Ordinance	Y	CEO	1/1988
3) Subdivision Ordinance	Y	Planning Board	5/1996
4) NFIP Flood Damage Prevention Ordinance	Y	CEO	1/2007
4a) Cumulative Substantial Damages	N		
4b) Freeboard	N		
5) Growth Management	N		
6) Floodplain Management / Basin Plan	Y	CEO	1/2007
7) Stormwater Management Plan/Ordinance	N		
8) Comprehensive Plan / Master Plan/ General Plan	Y	Planning Board	2/1965
9) Capital Improvements Plan	N		
10) Site Plan Review Requirements	N		
11) Open Space Plan	N		
12) Stream Corridor Management Plan	Y	NYDEC	
13) Watershed Management or Protection Plan	Y	County	
14) Economic Development Plan	N		
15) Comprehensive Emergency Management Plan	Y	Board of Trustees	3/2012
16) Emergency Response Plan	Y	Board of Trustees	3/2012
17) Post Disaster Recovery Plan	Y	County	
18) Post Disaster Recovery Ordinance	N		
19) Real Estate Disclosure Requirement	Y	Village Clerk	FEMA CRS Requirement 3/2013
20) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	N		

**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	N	
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	N	
3) Planners or engineers with an understanding of natural hazards	N	
4) NFIP Floodplain Administrator	Y	Code Enforcement
5) Surveyor(s)	N	
6) Personnel skilled or trained in "GIS" applications	N	
7) Scientist familiar with natural hazards	N	
8) Emergency Manager	N	
9) Grant Writer(s)	N	
10) Staff with expertise or training in benefit/cost analysis	N	

**E.3) Fiscal Capability**

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

#### E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	8	9/2012
Building Code Effectiveness Grading Schedule (BCEGS)	*6, **5	3/2008
Public Protection	NP	
Storm Ready	-	
Firewise	NP	

N/A = Not applicable. NP = Not participating. - = Unavailable.\*= 1 and 2 Family Residential. \*\*=Commercial and Industrial

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 village has completed the following mitigation actions:

- Dredging of Owasco Inlet by Cayuga County and State.
- Recently, the village completed a stormwater mitigation plan on West Ave. with the assistance of Cayuga County.
- The Town installed retention ponds to reduce flood of water into the village from Skinner Hill.

In the course of their routine administration, the village continues to support the following mitigation actions or programs:

- Conducts 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:

- Provide and maintain links to the HMP website, and regularly post notices on Cayuga 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 of mitigation grant funding, and personal natural hazard risk reduction measures.
- Works with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.
- Supports ongoing updates of Comprehensive Emergency Management Plans
- Maintains 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. Further, the village continues to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives below.
- Obtains and archives elevation certificates
- Continues to promote the participation of Floodplain Administrators within the planning process and other activities.

## **F.2) Hazard Vulnerabilities Identified**

The village identified the following hazard problems and problem areas within the community:

- Areas are prone to flooding in the Owasco Flats west of Main St on Aurora, W. Cayuga Streets.
- Flooding occurs in the area near the villages' wastewater treatment plant.
- Senior citizen housing along Millstream.
- South Main Street floodwater, stormwater diversion project.

Village officials reported recent stormwater run-off and flooding issues at the north end of the village from Oak Hill Road down onto North Main Street. There are culverts, however the road and the storm drains are owned by Cayuga County. Any retention areas and other culverts are all on and owned by private property owners. Due to this, the Village has little or no authority or funds to remediate this storm water run-off. Our hopes would be to work with Cayuga County and the property owners in the future to possibly relieve some of this run-off.

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

- Owasco Lake is a major Finger Lake located entirely within Cayuga County. It supplies drinking water to the City of Auburn and several towns within Cayuga County. Lake levels are controlled by the City of Auburn. However, in the event of a major storm, water levels could rise above normal stages and threaten lakeshore properties and homes. This could also head to contamination of the drinking water supply, as pollutants could overwhelm the water filtration plant's capabilities. Land use in the area includes residential areas and agriculture. Recreation areas, steep slopes and certain beaches on parts of the lake may require stabilization. The Cayuga County SWCD has worked on many such projects on the lake in the past, as well as dredging in areas that have received heavy siltation.

- The Village of Moravia is a low-lying village with several streams and watercourses flowing through it, coming down from steep slopes above. Historically, the village has experienced flooding from snowmelt and storm events. In some cases, road culverts have become plugged with debris from upstream. The village storm sewers are not adequate to handle excessive amounts of stormwater. Erosion from streambanks often leads to silt deposits in the flat areas in the village, reducing stream channels even further. Debris carried downstream into the village also creates logjams and flooding. The Cayuga County SWCD has worked with the Village in the past to address some of these issues, however, lack of funds has limited the projects.

NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Polices in 100-year Boundary (3)	# Polices in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Moravia (V)	121	16	\$76,025	0	0	114	3	4

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 Village of Moravia, 519 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 40.7% is located within the 1% annual chance flood area. \$44,792,262 (40.6%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area. There are 121 NFIP policies in the community. While there are 114 policies located within the 1% annual chance flood area, there are only policies issues to property owners in the 1% annual chance flood area. FEMA has identified 0 Repetitive Loss (RL) including 0 Severe Repetitive Loss (SRL) properties in the municipality.

HAZUS-MH estimates that for a 1% annual chance flood, \$5,027,030 (4.6%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged and 351 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	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(1)</sup>	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(1)</sup>
Four Town First Aid Squad, Inc.	Moravia (V)	Fire		X						
Village Office	Moravia (V)	Municipal Hall		X						
Village of Moravia	Moravia (V)	Highway Department		X						
Moravia (V)	Moravia (V)	Electric Substation	X							
Moravia Justice Center	Moravia (V)	Police	X							
Moravia Sewage Plant	Moravia (V)	WWTF	X							

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Name	Municipality	Type	Exposure		Potential Loss from 1% Flood Event <sup>(2)</sup>			Potential Loss from 0.2% Flood Event <sup>(2)</sup>		
			1% Zone	0.2% Zone	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(1)</sup>	Percent Structure Damage	Percent Content Damage	Days to 100-Percent <sup>(1)</sup>
Millstream Court	Moravia (V)	Senior	X		15	86.1	NA	16.43	95.3	NA
Northwoods	Moravia (V)	Senior	X		15.31	89.86	NA	16.32	94.95	NA
Village of Moravia	Moravia (V)	Highway Department	X		63	78	NA	63.82	78.82	NA
Well #2, #3, #4 & Treatment Plant	Moravia (V)	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.

With regards to the vulnerable critical facilities identified in the table above, village officials provided the following information:

- The Village Justice Center is a new facility and was built up above flood elevation when constructed.
- The Moravia Sewage Plant is a multi-million dollar facility, so relocating it would not be considered.
- The Electric Substation is owned by NYSEG, so the Village of Moravia has no authority over relocating it.

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
MV-1	Add berms along Mill Stream west of Rt. 38 Bridge (Senior Citizens Housing).	Existing	Flood	1-1 3-4	Municipal Public Works	Medium	Medium	Federal, State, County DOT Grants	Short Term DOF	Medium	SP
MV-2	Dredge the Owasco Inlet – project led by Cayuga County and the State.	N/A	Flood	4-1 4-2 4-3 4-4	NYSDEC, County, municipal	High	High	Federal, State, County grant opportunities	Short Term DOF	High	NR
MV-3	The Cayuga SWCD proposes to complete bank stabilization along the Owasco lakeshore and throughout the immediate unnamed smaller tributaries that flow into the lake, as needed. The reduction of soil loss would also be beneficial for the water quality of Owasco 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, local funding	On-going DOF	High	NR
MV-4	The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams in the several streams and watercourses flowing through the Village. Protecting the banks from erosion and removing excess gravel and debris	Existing	Flood	4-1 4-2 4-3 4-4	Cayuga SWCD; NYSDEC; USACE; County Highway Dept, Village DPW	High	High	HMA grants, State, County, local funding	Short Term DOF	High	NR

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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
	from the watercourses will allow the main flow of the water to remain in the channels. The SWCD will also work with the Village DPW and County Highway to properly size culverts and improve the storm sewers.										
MV-5	Work with Cayuga County and the property owners at the north end of the village, from Oak Hill Road down onto North Main Street, to relieve/remediate storm water run-off problems.	Both	Flood	4-1 4-2 4-3 4-4	Cayuga County Highway Dept, Village DPW, Local Property Owners	M-H	L-M	HMA grants, County, local funding	County, local funding	M	NR
MV-6	Remove the old LVRR bridge downstream of Grove Street to reduce flood risk to dozens of homes, the senior housing complex, and the business district.	Existing	Flood	4-1 4-2 4-3 4-4	Cayuga County Highway Dept, Village DPW	Medium	Medium	County, local funding	County, local funding	M	PP
MV-7	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
MV-8	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
MV-9	Develop programs/procedures to capture and archive loss data from events. Examples include: <ul style="list-style-type: none"> <li>Record location and length of roadway closures;</li> <li>Develop a database of residential and</li> </ul>	N/A	All Hazards	1-3 1-4	Municipality with support from County, NYSOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	PR



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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
	commercial property damage, including permit history for such repairs; <ul style="list-style-type: none"> <li>High water marks, perhaps painting phone poles with high water marks and or regulatory Base Flood Elevations (BFEs).</li> </ul>										
MV-10	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
MV-11	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
MV-12	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
MV-13	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



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
MV-14	Enhance Cayuga County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	N/A	Severe Storm	1-4 1-6 2-2	Municipality with support from County, NYSOEM and FEMA	Medium	Low	Municipal Budget	Short Term DOF	Medium	PE
MV-15	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)
MV-1	2	M	M	Y	Y	N	M
MV-2	4	H	H	Y	Y	N	H
MV-3	4	H	H	Y	Y	N	H
MV-4	4	H	H	Y	Y	N	H
MV-5	4	M-H	L-M	Y	N	Y	M
MV-6	4	M	M	Y	N	N	M
MV-7	2	M	M	Y	Y	Y	M
MV-8	2	M	M	Y	Y	Y	M
MV-9	2	M	M	Y	Y	Y	M
MV-10	4	M	L	Y	N	Y	H
MV-11	1	M	M	Y	N	Y	M
MV-12	2	M	M	Y	Y	N	M
MV-13	2	H	L	Y	Y	N	H
MV-14	3	M	L	Y	N	Y	M
MV-15	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

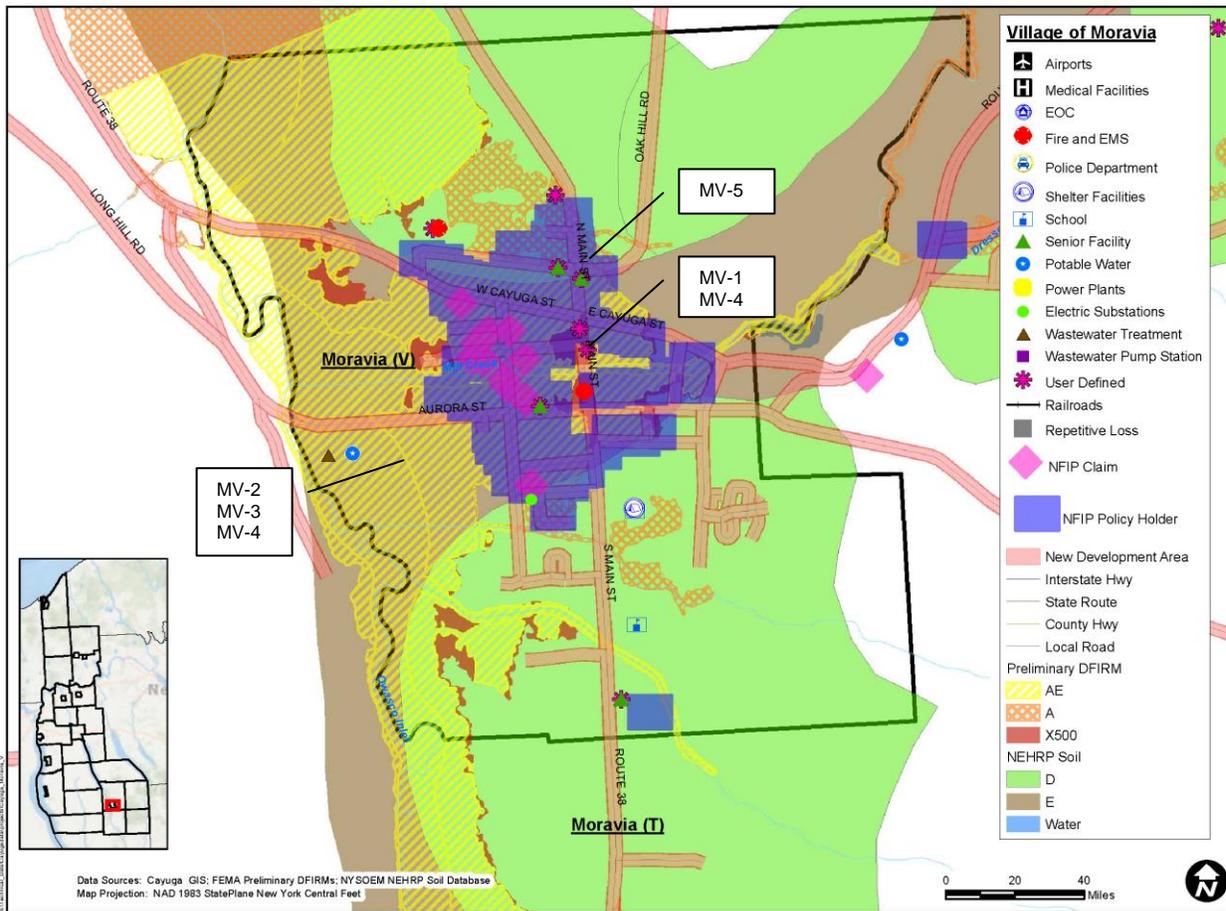
Prioritization of initiatives was based on parameters other than stated above: Not applicable.

### **H.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY**

### **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.

Figure 9.2-1. Village of Moravia Hazard Area Extent and Location Map



Sources: FEMA, 2011

Notes: NFIP = National Flood Insurance Program. RL = Repetitive Loss. SRL = Severe Repetitive Loss. The entire municipality is vulnerable to the following hazards: drought, earthquake, severe storm, and severe winter storm.

**J.) ADDITIONAL COMMENTS**

No additional comments at this time.

**K.) NFIP ADMINISTRATOR INPUT**

**1. Planning and Regulatory**

The Village of Moravia joined the NFIP on June 4, 1975, and is currently an active member of the NFIP. Flood Insurance Rate Maps have been in effect for the community since September 30, 1982. The Village of Moravia is proactive in floodplain management with ordinances meeting minimum requirements.

The Village of Moravia has completed Community Assistance Visits (CAV), with the most recent visit completed on March 17, 2013. As of December 2012 there is no need for a CAV. The Village of Moravia has no outstanding compliance issues.

**2. Administrative and Technical Staff**

The Village of Moravia has identified personnel to manage and uphold the Village of Moravia's compliance with the NFIP. Dedicated staff include: Code Enforcement Officer (Local Administrator) and the Village Clerk. Staff members (both dedicated and supplementary) complete numerous tasks in order for the Village of Moravia to be in compliance of NFIP standards. Tasks include permit reviews, building inspections, and CRS participation.

**3. Financial**

As of February, 2013 there are 129 of policies enforced within the Village of Moravia. Of the 129 insurance policies, 103 are within the Special Flood Hazard Area (SFHA), and 26 are located outside the SFHA. Repetitive loss insurance claims have been reported in one (1) area within the Village of Moravia including. As of February 11, 2013 there has been one (1) repetitive loss property within the Village of Moravia.

**4. Educational**

The Village of Moravia conducts numerous educational and/or outreach activities related to the NFIP. Activities include flood safe building practices, availability of flood insurance, and newsletters/brochures distributed throughout the year as part of the Community Rating System (CRS). The Village of Moravia's CRS ranking is "8".

**5. Actions to Strengthen the Program**

The Village of Moravia has taken numerous steps to strengthen the NFIP program and its administration. Actions include participation of the Community Rating System (CRS).