

## 9.1 COUNTY OF ONONDAGA

This section presents the jurisdictional annex for the County of Onondaga.

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

Primary Point of Contact	Alternate Point of Contact
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### B.) COUNTY PROFILE

Please refer to Section 4, Volume I of this Plan for details on Onondaga County's population, location, climate, history, growth and development.

### C.) NATURAL HAZARD EVENT HISTORY SPECIFIC TO THE COUNTY

Please refer to the Previous Occurrences and Losses section within the hazard profiles located in Section 5.4, Volume I.

### D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Rank #	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>
5	Earthquake	\$1,141,199,484	Rare	17	Low
3	Flood	\$1,914,229,000	Frequent	30	Medium
4	Ground Failure	Not available	Frequent	18	Low
1	Severe Storm	< \$500	Frequent	48	High
2	Severe Winter Storm	\$2,007,150,900	Frequent	48	High

a. Building damage ratio estimates based on FEMA 386-2 (August 2001)

b. High = Total hazard priority risk ranking score of 40 and above

Medium = Total hazard priority risk ranking of 20 - 39

Low = Total hazard risk ranking below 20

c. The valuation of general building stock and loss estimates determined in Onondaga County were based on the default general building stock database provided in HAZUS-MH MR3 (RSMeans 2006).

d. Severe storm and severe winter storm hazard 500-year MRP loss estimate is structural value only; does not include the value of contents. For severe winter storm, the loss estimate is 5% of total general building stock value.

e. Loss estimates for both structure and contents (500-year MRP for the flood hazard and 2,500-year MRP for the earthquake hazard).

f. Approximately 47% of the County's general building stock is located within the landslide hazard area.

g. Potential losses for severe storm are underestimated by HAZUS.

**E.) CAPABILITY ASSESSMENT**

This section identifies the following capabilities of the local jurisdiction:

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

**Legal and Regulatory Capability**

Regulatory Tools (Codes, Ordinances., Plans)	Local Authority (Y or N)	Prohibitions (State or Federal) (Y or N)	Higher Jurisdictional Authority (Y or N)	State Mandated (Y or N)	Code Citation (Section, Paragraph, Page Number, date of adoption)
1) Building Code	Y	N	Y	N	Regulated at local and state levels
2) Zoning Ordinance	Y	N	N	N	Regulated at local level
3) Subdivision Ordinance	Y	N	N	N	Regulated at local level
4) NFIP Protection Ordinance	Y	Y	Y	Y	Regulated at local level
5) Growth Management	Y	N	N	N	Regulated at the local level
6) Floodplain Management / Basin Plan	Y	Y	Y	N	OC SWCD has prepared stream stabilization plans and implemented some Best Management Practices (BMPs) for some streams in county.
7) Stormwater Management Plan/Ordinance	Y	N	Y	Y	Regulated at the local level
8) Comprehensive Plan / Master Plan	Y	N	N	N	2010 Development Guide and Framework For Growth, SOCPA 1998
9) Capital Improvements Plan	Y	N	N	N	2010-2015 Capital Improvement Plan, 2009
10) Site Plan Review Requirements	Y	Y	Y	N	Regulated at the local level
11) Open Space Plan	Y	N	N	N	
12) Economic Development Plan	Y	N	N	N	
13) Emergency Management / Response Plan	Y	N	Y	Y	Comprehensive Emergency Management Plan (CEMP) – 2007
14) Post Disaster Recovery Plan	Y	N	N	N	
15) Real Estate Disclosure req.	Y	N	N	N	

### 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	Syracuse-Onondaga County Planning Agency; Onondaga County Departments of Water Environment Protection, Transportation, Health; OC SWCD
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Onondaga County Departments of Water Environment Protection, Transportation, Health
3) Planners or engineers with an understanding of natural hazards	Y	Various county departments and agencies
4) Floodplain Administrator	N	N/A
5) Surveyor(s)	Y	OC SWCD, OCDOT
6) Personnel skilled or trained in "GIS" applications	Y	Syracuse-Onondaga County Planning Agency; OC SWCD
7) Scientist familiar with natural hazards in Onondaga County.	Y	Various county departments and agencies
8) Emergency Manager	Y	Onondaga County Department of Emergency Management
9) Grant Writer(s)	Y	Onondaga County Soil & Water Conservation District (for some agricultural-environmental projects)
10) Staff with expertise or training in benefit/cost analysis	Y	Various County Departments

### Fiscal Capability

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

### Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	N/A	N/A
Storm Ready	NP	NP
Firewise	NP	NP

Note: Higher classification applies to when subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

N/A = Not applicable. - = Unavailable.

The above referenced classifications can be viewed as a gauge of this community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation). These classifications are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance. Classifications range on a scale of 1 to 10 with class one being the best possible classification, and class 10 representing no classification benefit. Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Fire Suppression Rating Schedule

**F.) PROPOSED HAZARD MITIGATION INITIATIVES**

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
OC-0	Onondaga County, working along with the inclusive municipalities, shall conduct and facilitate community and public education and outreach to include, but not be limited to, the following to promote and effect natural hazard risk reduction: <ul style="list-style-type: none"><li>Enhance the Onondaga County HMP website as a current source for the latest version of this Plan, annual plan review reports, mitigation grant announcements, and related mitigation guidance and resources.</li><li>Contact each municipality to encourage them to provide and maintain links to the Onondaga County HMP website.</li><li>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.</li><li>Use available municipal 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.</li><li>Work with regional agencies, neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.</li></ul>							
	See above.	N/A	All Hazards	All Goals	County (through SOCPA and EM) – working with local officials and floodplain administrators	Low	County and Municipal Budgets; grant eligible for a defined outreach program	Short
OC-1	Continue to support the implementation, monitoring, maintenance and update of this Plan, as defined in Section 7.0	N/A	All hazards	All Goals and Objectives	OC Hazard Mitigation Planning Coordinator	Low	County Budget; FEMA	Long
OC-2	Support local government compliance with and good-standing in the National Flood Insurance program.	N/A	Flood, Severe Storm	1-1, 1-3, 1-7, 1-8; 2-3, 2-4, 2-5; 5-2, 5-3	County (through SOCPA and EM)	Low	County Budget	Short
OC-3	Continue to develop, enhance and implement existing emergency plans.	N/A	All hazards	1-4, 1-5, 1-8; 3-3, 3-5; Goal 6, all	OC Emergency Management	Low	County Budget	Ongoing

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
				objectives				
OC-4	Create / enhance / maintain mutual aid agreements with surrounding Counties and NYSEMO.	N/A	All hazards	3-3; 5-2, 5-3, 5-5, 5-6; 6-5, 6-6	OC Emergency Management	Medium	County Budget	Ongoing
OC-5	Newport Road Drainage Improvement Project	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4	County DOT	High	County Budget	Short
OC-6	Canton Street Drainage Improvement Project	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4	County DOT	High	County Budget	Short
OC-7	Limestone Creek Bank Stabilization (North Street Reconstruction Project)	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4; 4-1	County DOT	Low	County Budget	Short
OC-8	Hitchings Road Bridge Scour Protection	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4, 3-6	County DOT	\$1.0M Medium	County Budget & FHWA	Short
OC-9	Watervale Road Bridge Scour Protection	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4, 3-6	County DOT	\$50K Medium	County Budget & FHWA	Short
OC-10	Tully Farms Road Culvert Replacement	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4	County DOT	High	County Budget	TBD
OC-11	Tanner Road Culvert Replacement	Existing	Flood, Severe Storm	1-2, 1-6; 3-2, 3-4	County DOT	High	County Budget	TBD
OC-12	Stream gage/flood forecasting project along canal system with USGS and NWS	N/A	Flooding, Severe Storm	1-4, 1-6; 2-3; 5-1, 5-3; 6-3	OC Office of Environment w/ USGS and NWS support	\$500K	Federal, pending continued or expanded appropriation for stream gaging program	Long
OC-13	Work with the NYSDEC and other stakeholders (e.g. CNY Waterways, NYS Canal Corporation, Oneida Lake Advisory Committee) to	N/A	Flood, Severe Storm	1-7, 1-8; 4-1, 4-4; 5-1, 5-2, 5-3	OC Flood Advisory Committee	Low - Medium	County Budget	Short

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	<p>promote the Flood Mitigation Task Force which may serve as a tool to provide better coordination and communication for regional water level management (problem and initiative further detailed below).</p> <p>Seneca/Oneida/Oswego River Water Level Control:</p> <p>Since the Canal System was designed more than 100 years ago there have been subsequent widenings, expansions, upgrades and realignments to the system. Also during the past 100 years the watershed of the Canal System has undergone a complete transformation due to changes in land use and development patterns. This has occurred while the hydraulics of the system, the Canal channel and water control facilities have not been modified to accommodate these changes. Additionally, the entities affecting water level throughout the system often have competing needs or priorities. As a consequence, the region has experienced Canal closures associated with high water and flooding, and negative impacts on Canal-side property owners, business owners and boaters.</p> <p>Today, water levels along the Canal System are directly affected by the actions of non-Canal decision makers who do not always take into account the impact of their actions on the basin downstream. The Finger Lakes are the largest set of interconnected waterways in the State. Six separate public entities and four hydropower generation companies affect the water levels for eight lakes. Water management decisions are not coordinated among these groups. Decisions made to protect minor local issues sometimes result in major consequences downstream. The upstream entities are either not aware of, or do not take into consideration the consequences of their actions. While not all flooding is preventable, this lack of coordination and cooperation has been the primary cause of "avoidable" Canal closures and the high water conditions that negatively impact private Canal-side property owners.</p> <p>The current water management system requires greater statewide communication and coordination to address these water level challenges. A Canal Flood Mitigation Task Force has been created by New York State with participation from State agency partners and local government officials to enhance and improve water management in the Oneida-Oswego-Seneca River Basin. The Commission's specific charge should be establishing a more coherent and comprehensive system of water management in the Basin.</p> <p>Member of the Onondaga County Flood Advisory Committee have further identified potential projects to help alleviate regional (e.g. expansion and/or modifications to dams such as the dam in Baldwinsville). Such input from the Advisory Committee should be presented to the Flood Task Force as part of working towards regional water management and flood control initiatives.</p>							
OC-14	Help to promote awareness and use of NYAlert by communities and citizens – include information on county website, etc.	N/A	All hazards	1-5; 2-1; 3-7; 6-4	County OEM	Low - Medium	County Budget	Ongoing
OC-15	Run a parallel line of 24 miles of 54" water pipeline from Lake	N/A	Earthquake	1-2, 1-6; 3-2, 3-4,	Metropolitan Water Board	\$60-80 MM	TDB	Long-term DOF

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	Ontario to the City of Syracuse, built to seismic standards. The existing water supply line is now more than 40 years old, is vulnerable to damage including seismic impacts, and has inadequate redundant supply in the event of damage or loss.			3-5, 3-6; 6-5				
OC-16	Southwestern Branch Pipeline Project. Install ~7 miles of 48" water supply main, built to seismic standards, to provide an alternate water supply to the City of Syracuse.	N/A	Earthquake	1-2, 1-6; 3-2, 3-4, 3-5, 3-6; 6-5	Metropolitan Water Board	\$40 MM (2003 \$)	TDB	Long-term DOF
OC-17	Support/Participate in the Stream Team program offered by the Onondaga County SWCD, to assist in the removal of debris, log jams, etc. in flood vulnerable stream sections.	N/A	Flooding	1-3, 1-7; 2-3; 4-1, 4-4; 5-1, 5-2, 5-3	County, OCSWCD (Mark Burger)	Medium	Local, NYS, and Federal Sources	On-going
OC-18	Keep a geo-referenced list and information on critical facilities, natural resources, environmentally sensitive areas, and hazard prone areas.	Existing	All Hazards	1-2, 1-3, 1-7; 2-3; 3-2; 4-2, 4-4; 5-3	SOCPA, working with all municipalities and agencies	Low - Medium	County Budgets	On-going
OC-19	Encourage the incorporation of conservation subdivision principles into subdivision review.	New	Flood, Ground Failure, Earthquake	1-8; 2-6; 3-1; 4-1, 4-4; 5-3	SOCPA, regional planning, OCSWCD, municipalities	Low	Local, County, NYS DOS Funding	Short
OC-20	Encourage towns and villages to adopt comprehensive plans and land use regulations to foster sound development principles.	New	Flood, Ground Failure, Earthquake	1-3, 1-7, 1-8; 3-1, 3-4, 3-7; Goal 4 (all objectives); 5-2, 5-3	SOCPA, Regional Planning, OC SWCD; municipalities	Low - Medium	County and Local	Ongoing



Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
OC-21	Continue to authorize the Onondaga County Planning Board to review subdivisions under NYS GML 239.	New	Flood, Ground Failure, Earthquake	1-8; 2-6; 3-1; 4-1, 4-4; 5-3	SOCPA, County Planning Board and municipalities	Low	County	Ongoing
OC-22	Work with existing agencies and organizations to develop open space strategies and conservation standards to be met by new development projects.	New	Flood, Ground Failure, Earthquake	1-7, 1-8; 2-3, 2-6; 3-1; Goal 4 (all objectives); 5-1 thru 5-4	SOCPA, Regional Planning, OC SWCD, other appropriate agencies	Low	County, municipalities, Non-Profits and other agencies	Ongoing
OC-23	Promote public awareness of hazard mitigation planning activities and provide a venue for ongoing public and stakeholder input.	Both	All Hazards	2-1, 2-2, 2-4, 2-5, 2-6; 3-6, 3-7; 5-4	SOCPA with municipalities	Low – Medium	County, municipalities	Ongoing
OC-24	Encourage municipalities to establish an additional layer of zoning within identified natural hazard areas.	New	Flood, Ground Failure	1-8; 2-6; 3-1; 4-1, 4-4; 5-3	SOCPA with municipalities	Low	County, municipalities	Ongoing
OC-25	Undertake a countywide comprehensive plan to foster environmental protection, sound development practice and natural hazard risk management.	N/A	All Hazards	1-7, 1-8; 2-3; 3-1, 3-2, 3-4, 3-7; Goal 4 (all objectives); 5-1 thru 5-3	SOCPA with municipalities	Medium - High	County and local budgets	Longterm DOF
OC-26	Create data sets for reverse 911, targeted to identified hazards of concern	N/A	All Hazards (Response)	1-4, 1-5; 3-4, 3-7; 6-3	SOCPA, OCOEM, municipalities	Medium - High	County and local budgets	TBD
OC-27	Develop procedures, protocols and plans for composting of animal mortality	N/A	Flood, Earthquake, Severe Storm, Severe Winter Storm (Post-	1-4; 3-4; 5-5; 6-3, 6-6	DOH, OCSWCD	Low-Medium	TBD	Short

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
			Disaster - Recovery)					
OC-28	Provide technical assistance at agricultural spills/emergencies	N/A	Flood, Earthquake, Severe Storm (Post-Disaster - Response)	1-4; 3-4; 5-5; 6-3, 6-6	County and Local OEM	Low-Medium	TBD	Short
OC-29	Provide technical assistance for Stream / Shoreline Stabilization	N/A	Flooding, Severe Storm	1-2, 1-6, 1-7; 4-1, 4-2; 5-1, 5-3, 5-4	OCSWCD	Low-Medium	TBD	Short
OC-30	Re-vegetation of critical areas w/ hydroseeder/ bale chopper	N/A	Flooding, Severe Storm, Ground Failure (Post Disaster - Recovery)	1-4; 3-4; 4-1, 4-2; 5-5; 6-3, 6-6	OCSWCD	Low-Medium	TBD	Short
OC-31	Support the potential mitigation actions identified in the 2006 Beartrap-Ley Creek Drainage District Study. More specific actions are identified in the following jurisdictional annexes: City of Syracuse; Towns of Cicero, Dewitt, Manlius and Salina; Villages of East Syracuse and North Syracuse.	N/A	Flooding, Severe Storms	1-3, 1-6; 3-2, 3-5, 3-6; 4-1, 4-2; 5-2	OC Dept of Water Environment Protection; Beartrap-Ley Creek Drainage District	Low – High (dependant on initiative)	FEMA HMA (dependant on initiative)	DOF
OC-32	Erie Boulevard Storage System – alter and expand this system to capture more combined sewer overflows during wet weather events.	Existing	Flooding, Severe Storms	1-2; 3-2, 3-4; 4-1, 4-2;	OC Dept of Water Environment Protection	\$10-18 million	Sanitary District	Ongoing
OC-33	Assist local municipalities with training opportunities for municipal planning and zoning officials	N/A	All Hazards	1-4; 3-4; 6-3	SOCPA County, OCSWCD	Low - Medium	NYS or other sources	Short
OC-	Participate in regional, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to							

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
34	<p>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"> <li>Support the performance of enhanced risk and vulnerability assessments for hazards including flooding, earthquake, wind, and land failure.</li> <li>Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use.</li> </ul> <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, or "Rapid Observation of Vulnerability and Estimation of Risk - ROVER). It is recognized that these programs will likely need to be initiated and supported at the Regional and/or State level, and will likely require training, tools and funding provided at the regional, state and/or federal level.</p>							
	See above.	Existing	All Hazards	1-2, 1-4, 1-6; 2-3; 3-2; 5-2, 5-3; 6-2, 6-3, 6-5	OC EM	M-H	Regional funding; Mitigation grant programs (PDM or HMGP) with local match	Long
OC-35	<p>Within the first year of Plan adoption, request FEMA to conduct a mitigation workshop targeting those communities with significant numbers of flood vulnerable properties and Repetitive Loss/Severe Repetitive Loss (RL/SRL) properties (e.g. Towns of Cicero, DeWitt, Elbridge, Lafayette, Lysander, Manlius; Village of Skaneateles; City of Syracuse). This program should address the specific interests and concerns of these flood vulnerable communities in the County which includes:</p> <ul style="list-style-type: none"> <li>Gaining a better understanding of the available mitigation grant programs, including the procedural requirements of a RL/SRL community under this program;</li> <li>Understanding how flood vulnerable and RL/SRL communities can enhance their efforts to encourage and support property owners to mitigate their properties,</li> <li>Understanding how flood vulnerable and RL/SRL communities can best leverage existing data, information and studies (e.g. NFIP data) to target specific properties for mitigation, and</li> <li>Learning what resources are available to conduct/complete Repetitive Loss Area Analyses, and gather critical data (e.g. structure elevations) to screen and move properties through the applicable mitigation grant programs.</li> </ul> <p>The County shall promote this workshop through established groups and forums including the OC SWCD and the ongoing County Hazard Mitigation Planning Committee. Further, the County shall continue to conduct meetings as needed with these flood vulnerable communities, with the support of</p>							

Initiative #	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals/ Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Time-line
	NYSOEM and FEMA, to assist communities as they work to address their flood vulnerable and RL/RSL properties.							
	See description above	Existing	Flood, Severe Storm	1-1; 2-1, 2-5, 2-6; 3-6, 3-7; 5-4, 5-6	County Hazard Mitigation Coordinator	L	Existing Budgets	Short (year 1)
OC-36	Within the first year of plan implementation, identify order of magnitude costs for county-sponsored structural and infrastructure mitigation projects identified in the County annex, and identify the mitigation benefits associated with each of these initiatives. An updated project prioritization for county-sponsored projects shall be provided as part of the 1st year annual review and update. Further, work with members of the ongoing mitigation planning committee and project implementation leads to complete a similar effort for local initiatives identified in each community's annex.							
	See description above	N/A	All Hazards	All Goals and Objectives	County Engineer working with local project leads	M	Existing Budgets	Short (year 1)

DHS Department of Homeland Security

DOF Depending on Funding

DPW Department of Public Works

FEMA Federal Emergency Management Agency

HMA Hazard Mitigation Assistance

Long

Short

TBD

5 years or greater.

1 to 5 years

To be determined

\*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure?

## G.) ANALYSIS OF MITIGATION ACTIONS

This table summarizes the participant's mitigation actions by hazard of concern and the six mitigation types to illustrate that the County has selected a comprehensive range of actions/projects.

Hazard of Concern	Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	OC-1, OC-19 thru OC-22, OC-25, OC-33	OC-1, OC-15, OC-16, OC-29, OC-36	OC-0, OC-1, OC-14, OC-18, OC-23, OC-26, OC-34	OC-1, OC-18, OC-19 thru OC-22, OC-25, OC-36	OC-1, OC-3, OC-4, OC-14, OC-18, OC-26, OC-27, OC-28, OC-34	OC-1, OC-29, OC-36
Flooding (riverine, flash, coastal and urban flooding)	OC-1, OC-2, OC-12, OC-13, OC-17, OC-19 thru OC-22, OC-24, OC-25, OC-31, OC-33	OC-1, OC-2, OC-5 thru -11, OC-31, OC-32, OC-35, OC-36	OC-0, OC-1, OC-2, OC-12, OC-14, OC-18, OC-23, OC-26, OC-34, OC-35	OC-1, OC-7, OC-13, OC-17, OC-18, OC-19 thru OC-22, OC-24, OC-25, OC-29, OC-31, OC-32, OC-36	OC-1, OC-3, OC-4, OC-14, OC-18, OC-26, OC-27, OC-2, OC-34	OC-1, OC-5 thru -11, OC-13, OC-29, OC-31, OC-32, OC-36
Ground Failure	OC-1, OC-19 thru OC-22, OC-24, OC-25, OC-33	OC-1	OC-0, OC-1, OC-14, OC-18, OC-23, OC-26, OC-34	OC-1, OC-18, OC-19 thru OC-22, OC-24, OC-25	OC-1, OC-3, OC-4, OC-14, OC-18, OC-26, OC-34	OC-1
Severe Storms (windstorms, thunderstorms, hail, lightning, and tornadoes)	OC-1, OC-2, OC-12, OC-13, OC-17, OC-25, OC-31, OC-33	OC-1, OC-2, OC-5 thru -11, OC-29, OC-31, OC-32, OC-35, OC-36	OC-0, OC-1, OC-2, OC-12, OC-14, OC-18, OC-23, OC-26, OC-34, OC-35	OC-1, OC-7, OC-13, OC-17, OC-18, OC-25, OC-29, OC-31, OC-32, OC-36	OC-1, OC-3, OC-4, OC-14, OC-18, OC-26, OC-27, OC-28, OC-34	OC-1, OC-5 thru -11, OC-13, OC-29, OC-31, OC-32, OC-36
Severe Winter Storm (heavy snow, blizzards, ice storms)	OC-1, OC-25, OC-33	OC-1, OC-36	OC-0, OC-1, OC-14, OC-18, OC-23, OC-26, OC-34	OC-1, OC-18, OC-25, OC-36	OC-1, OC-3, OC-4, OC-14, OC-18, OC-26, OC-27, OC-34	OC-1, OC-36

Notes:

- Prevention:** Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.

2. **Property Protection:** 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 acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
3. **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. **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. **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.
6. **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.

**H.) 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)
OC-0	38	M	L	Y	Y (for defined outreach project)	Y	H
OC-1	38	M	M	Y	N (Yes for 5 year update)	Y	H
OC-2	9	H	L	Y	N	Y	H
OC-3	8	M	L	Y	N	Y	H
OC-4	7	M	L	Y	N	Y	H
OC-5	4	M-H	H	Y	Y	Y	H
OC-6	4	M-H	H	Y	Y	Y	H
OC-7	5	M-H	L	Y	Y	Y	H
OC-8	5	M-H	M	Y	Y	Y	H
OC-9	5	M-H	M	Y	Y	Y	H
OC-10	4	M-H	H	Y	Y	Y	M
OC-11	4	M-H	H	Y	Y	Y	M
OC-12	6	M	M-H	Y	Y (not HMA)	N	L-M
OC-13	7	M	L-M	Y	N	Y	H
OC-14	4	M	L-M	Y	Y (not HMA)	Y	H (ongoing)
OC-15	7	M-H	H	Y	TBD (not HMA)	N	L-M
OC-16	7	M-H	H	Y	TBD (not HMA)	N	L-M
OC-17	8	H	L - H	Y	Y	Dependant on specific initiative	H (ongoing)
OC-18	8	M	L-M	Y	N	Y	H (ongoing)
OC-19	6	L-M	L	Y	N	Y	M
OC-20	12	L-M	L	Y	N	Y	H (ongoing)
OC-21	6	L-M	L	Y	N	Y	H (ongoing)
OC-22	13	L-M	L	Y	N	Y	H (ongoing)
OC-23	8	L-M	L-M	Y	Y	Y	H (ongoing)
OC-24	6	L-M	L	Y	N	Y	M
OC-25	14	M	M-H	Y	TBD (not HMA)	Y	M
OC-26	5	M	M-H	Y	TBD (not HMA)	N	L-M

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)
OC-27	5	L-M	L-M	Y	N	TBD	L
OC-28	5	L-M	L-M	Y	TBD (not HMA)	N	L-M
OC-29	8	M	L-M	Y	Y	TBD	M
OC-30	7	M	L-M	Y	N	TBD	L-M
OC-31	8	L-H	L-H	Y	Y	TBD (dependent on specific project)	H
OC-32	5	M-H	H	Y	Y	Y	H (ongoing)
OC-33	3	L-M	M	Y	Y (not HMA)	TBD	M
OC-34	8	M-H	M-H	Y	Y	N	M
OC-35	8	M	L	Y	N	Y	H
OC-36	All	M	L-M	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:

Prioritization of initiatives was based on parameters other than stated above:

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

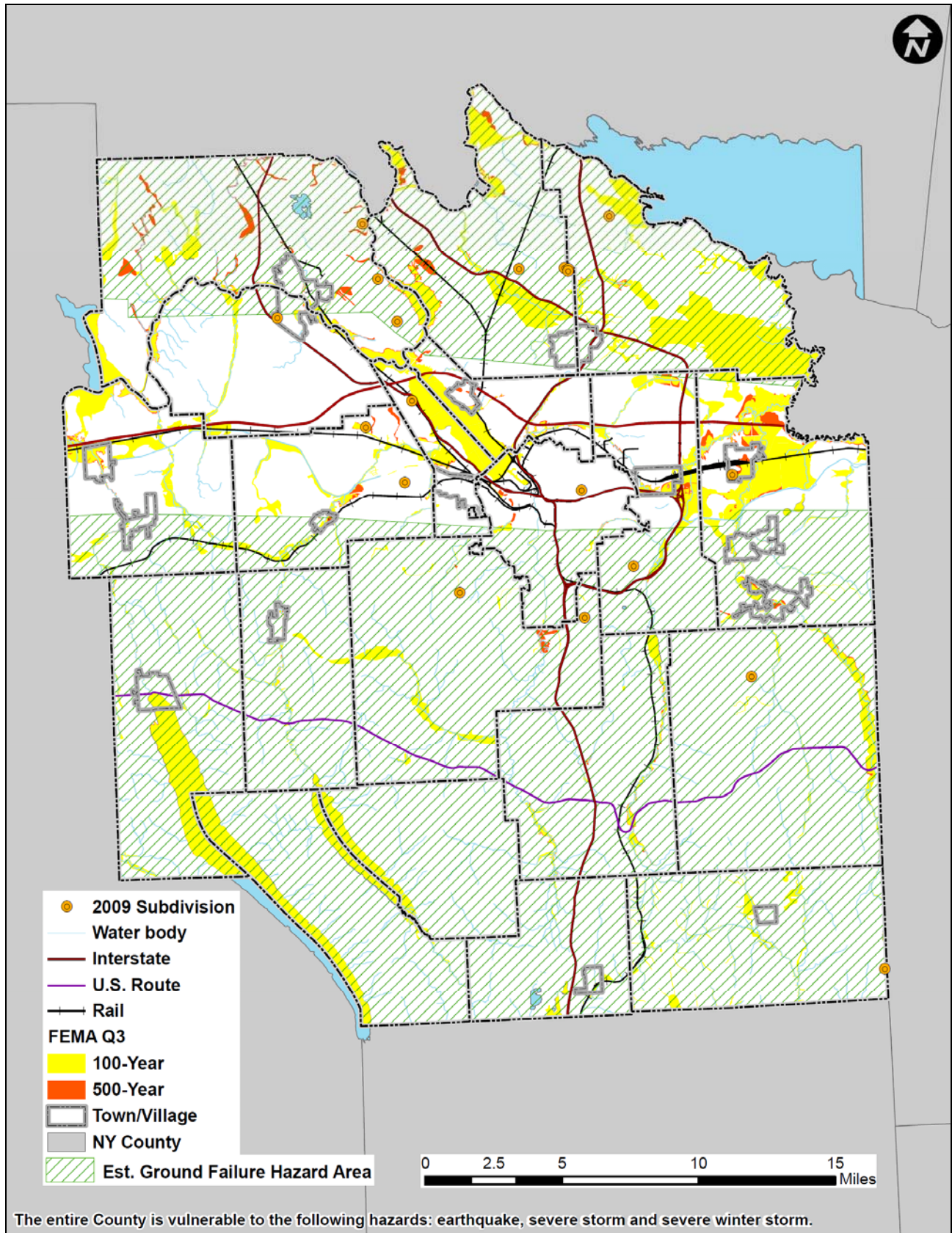
None identified at this time.

#### **J.) HAZARD AREA EXTENT AND LOCATION**

A hazard area extent and location map has been generated and is provided below for Onondaga County to illustrate the probable areas impacted within the County. 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 County has significant exposure. Additional county maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan.

#### **K.) ADDITIONAL COMMENTS**

No additional comments at this time.



Sources: FEMA Q3; NYSDPC, 2008; Syracuse-Onondaga County Planning Agency, 2009