

Appendix A

Additional Tables and Figures

Tables

Table 1.1 - Jurisdiction Participation Criteria for the Oswego County Hazard Mitigation Plan Update					
Jurisdiction	Attend at Least One (1) Working Group or Individual Meeting	Update 2012 Information to Meet Current Hazard Mitigation Planning Standards	Review Jurisdictional Annex	Assist with Public Review Process*	Pass Resolution to Formally Adopt HMP Update**
Albion, Town	X	X	X		
Amboy, Town	X	X	X		
Boylston, Town	X	X	X		
Central Square, Village	X	X	X		
Cleveland, Village	X	X	X		
Constantia, Town	X	X	X		
Fulton, City	X	X	X		
Granby, Town	X	X	X		
Hannibal, Town	X	X	X		
Hannibal, Village	X	X	X		
Hastings, Town	X	X	X		
Lacona, Village	X	X			
Mexico, Town	X	X	X		
Mexico, Village	X	X	X		
Minetto, Town	X				
New Haven, Town	X	X	X		
Orwell, Town	X	X	X		
Oswego County	X	X	X		
Oswego, City	X	X	X		
Oswego, Town	X	X	X		
Palermo, Town	X	X	X		
Parish, Town	X	X			
Parish, Village	X	X	X		
Phoenix, Village	X	X	X		
Pulaski, Village	X	X	X		
Redfield, Town	X	X	X		
Richland, Town	X	X	X		
Sandy Creek, Town	X	X	X		
Sandy Creek, Village	X	X	X		
Schroepfel, Town	X	X	X		
Scriba, Town	X	X	X		
Volney, Town	X	X	X		
West Monroe, Town	X	X	X		
Williamstown, Town	X	X			

*Public review was initiated in April 2019. Jurisdictions will assist with public review by advertising the online plan link to their communities.

**Jurisdictions will pass resolutions to adopt the updated HMP after the final plan is approved by NYSDHSES and FEMA.

Table 1.2 - Jurisdiction Representatives for the Oswego County Hazard Mitigation Plan Update		
Jurisdiction	Jurisdiction Representative(s)	Affiliation
Albion, Town	David Aaron Walter	Town Supervisor
	Lonny Mattison	Deputy Town Supervisor
Amboy, Town	Kathleen Wilkinson	Town Supervisor
	Lawrence Rayder	Deputy Town Supervisor
Boylston, Town	Ann Stacy	Town Supervisor
	Michael Stacy	Highway Superintendent
Central Square, Village	Ken Sherman	Mayor
	Heather Stevens	Village Trustee
Cleveland, Village	Laureen Tackman	Mayor
Constantia, Town	Kenneth Mosley	Town Supervisor
Fulton, City	Ron Woodward	Mayor
	David Eiffe	Fire Chief
	Cathy Trowbridge	Administrative Assistant- Mayor's Office
Granby, Town	John Snow, Jr.	Town Supervisor
	Jeffrey Richards	Highway Superintendent
	Janet Ingersoll	Town Clerk
Hannibal, Town	Virginia Wilbur	Town Supervisor
	Denise Hafner	Town Clerk
	Jake Malcott	Highway Superintendent
Hannibal, Village	Ron Greenleaf	Mayor
	Joe Caruana	Deputy Mayor
	Jake Malcott	Town Highway Superintendent
Hastings, Town	Tony Bush	Town Supervisor
Lacona, Village	Peggy Manchester	Mayor
Mexico, Town	David Anderson	Town Supervisor
	Eric Behling	Deputy Town Supervisor
Mexico, Village	Terry Grimshaw	Mayor
	Jim Hotchkiss	Deputy Mayor
	John Power	DPW Supervisor
Minetto, Town	David Domicolo	Town Supervisor
	Dominick Yacco	Highway Superintendent
New Haven, Town	William Rombough	Town Councilman
	Tim Teifke	Town Supervisor
	Debra Allen	Town Clerk
	Robert Parkhurst	Highway Superintendent
Orwell, Town	William Potter	Town Supervisor
	Nicholas Marshall	Deputy Town Supervisor
Oswego, City	Randall Griffin	Fire Chief
	John Chawgo	Assistant Fire Chief
	Justin Norfleet	Deputy Fire Chief
Oswego, Town	Richard Kaulfuss	Town Supervisor
	David Sterio	Highway Superintendent
	Greg Herrmann	Town Councilor

Jurisdiction	Jurisdiction Representative(s)	Affiliation
Palermo, Town	Robert Loomis	Town Councilman
	Patricia Redhead	Town Supervisor
Parish, Town	Mary Ann Phillips	Town Supervisor
	John Dunham	Deputy Town Supervisor
	Craig Petit	Highway Superintendent
Parish, Village	Kathryn Perkins	Mayor
	Jackie Murphy	Village Trustee
	Evelyn Stelmashuck	Village Clerk
Phoenix, Village	James Lynch	Village Administrator
	John Kerfein	Public Works Superintendent
	Marty Nerber	Police Chief
Pulaski, Village	Angel Rodriguez	Mayor
	Michele Cusyck	Village Clerk
Redfield, Town	Tanya Yerdon	Town Supervisor
Richland, Town	Daniel Krupke	Town Supervisor
Sandy Creek, Town	Nancy Ridgeway	Town Supervisor
	Ruth Scheppard	Deputy Town Supervisor
	Mike Kastler	Highway Superintendent
	Tammy Miller	Town Clerk
Sandy Creek, Village	Grant Rohmoser	Mayor
	Sharon Turo	Village Trustee
Schroeppel, Town	Lynett Greco	Town Supervisor
Scriba, Town	Robert Ramsey	Town Supervisor
	Michael Barry	Highway Superintendent
	Don LaBarge	Code Enforcement Officer
Volney, Town	Dennis Lockwood	Town Supervisor
West Monroe, Town	Vern Sundet	Town Supervisor
	Kevin Davis	Highway Superintendent
Williamstown, Town	John Hamblin	Town Supervisor
	Henry Allen	Highway Superintendent
Oswego County	Terry Bennett	Coordinator, Emergency Services Program
	Dale A. Currier, CEM	Director, Emergency Management

Table 2.3 – 2017 Land Use Regulations for Oswego County Jurisdictions (Oswego County Dept. of Community, Planning and Tourism, 2017)											
Jurisdiction	Comprehensive or Land Use Plan	Zoning	Subdivision Regulations	Mobile Home	Mobile Home Park	Junk Yard	Sign Law	Sanitary Code	Unif. Code	Flood Regulations	Others
Towns											
Albion	Adopted	-	Adopted	Local Law	-	Local Law	-	-	Locally Enforced	Local Law	-
Amboy	Adopted	Local Law	-	-	-	Local Law	-	-	Locally Enforced	Local Law	Site Plan Review
Boylston	-	Local Law	Local Law	Local Law	In Zoning	Local Law	In Zoning	-	Locally Enforced	Local Law	-
Constantia	Adopted	Land Dev. Law	Adopted	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review, Outdoor Storage, Land Dev. Law
Granby	Adopted	Local Law	Adopted	Local Law	Local Law	Local Law	In Zoning	In Zoning	Locally Enforced	-	Site Plan Review
Hannibal	Adopted	Local Law	Adopted	-	-	Local Law	-	Local Law	Locally Enforced	-	Site Plan Review
Hastings	Adopted	Local Law	Adopted	Local Law	Local Law	Local Law	In Zoning	Local Law	Locally Enforced	-	Site Plan Review
Mexico	Adopted	Local Law	Adopted	In Zoning	In Zoning	In Zoning	In Zoning	Local Law	Locally Enforced	Local Law	Site Plan Review
Minetto	-	Local Law	Adopted	In Zoning	In Zoning	In Zoning	In Zoning	-	Locally Enforced	Local Law	Site Plan Review
New Haven	In progress	Land Dev. Law	-	Local Law	Local Law	Local Law	-	-	Locally Enforced	Local Law	Flood Damage Prevention, Land Dev. Law, Site Plan Review
Orwell	Adopted	-	-	Local Law	Local Law	-	-	-	Locally Enforced	Local Law	Hazardous Waste Inc.
Oswego	Adopted	Local Law	Adopted	Local Law	Local Law	In Zoning	In Zoning	Local Law	Locally Enforced	Local Law	Site Plan Review, Wind Energy Conservation
Palermo	-	-	Adopted	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	-	Site Plan Review
Parish	Adopted	Local Law	Adopted	Local Law	Local Law	Local Law	-	-	Locally Enforced	Local Law	Site Plan Review
Redfield	-	-	Adopted	Local Law	-	Local Law	-	-	Locally Enforced	Local Law	Recreational Vehicle Law, Highway Standards
Richland	Adopted	Local Law	Adopted	In Zoning	In Zoning	Local Law	In Zoning	Local Law	Locally Enforced	Local Law	Outdoor Storage, Site Plan Review
Sandy Creek	Adopted	-	-	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review
Schroepfel	Adopted	Local Law	Adopted	Local Law	Local Law	Local Law	Local Law	Local Law	Locally Enforced	Local Law	Site Plan Review
Scriba	Adopted	-	Adopted	Local Law	Local Law	Local Law	-	-	Locally Enforced	Local Law	Water & Sewer Ord., Site Plan Review
Volney	Adopted	Local Law	Adopted	Local Law	In Zoning	In Zoning	In Zoning	-	Locally Enforced	Local Law	Site Plan Review
West Monroe	Adopted	Local Law	Adopted	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review
Williamstown	-	-	-	Local Law	-	-	-	Local Law	Locally Enforced	Local Law	Recreational Vehicle Law
Villages											
Cleveland	Adopted	-	-	Local Law	Local Law	Local Law	-	-	Locally Enforced	Local Law	Site Plan Review

Table 2.3 – 2017 Land Use Regulations for Oswego County Jurisdictions (Oswego County Dept. of Community, Planning and Tourism, 2017)											
Jurisdiction	Comprehensive or Land Use Plan	Zoning	Subdivision Regulations	Mobile Home	Mobile Home Park	Junk Yard	Sign Law	Sanitary Code	Unif. Code	Flood Regulations	Others
Hannibal	Adopted	Local Law	Adopted	In Zoning	In Zoning	In Zoning	In Zoning	In Zoning	Locally Enforced	Local Law	Site Plan Review
Central Square	Adopted	Local Law	Adopted	Local Law	In Zoning	Local Law	In Zoning	Local Law	Locally Enforced	Local Law	Site Plan Review
Mexico	-	Local Law	-	Local Law	In Zoning	Local Law	In Zoning	Local Law	Locally Enforced	Local Law	Site Plan Review
Parish	Adopted	Local Law	Adopted	-	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review
Pulaski	Adopted	Local Law	Adopted	Local Law	In Zoning	In Zoning	In Zoning	Local Law	Locally Enforced	Local Law	Site Plan Review
Lacona	Adopted	-	-	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review
Sandy Creek	Adopted	-	-	Local Law	Local Law	Local Law	-	Local Law	Locally Enforced	Local Law	Site Plan Review, Telecom Law
Phoenix	Adopted	Local Law	Adopted	Local Law	Local Law	In Zoning	In Zoning	Local Law	Locally Enforced	Local Law	Historic Preservation Dist., Site Plan Review
Cities											
Oswego	Adopted	Local Law	In Zoning	In Housing/ Zoning	In Housing/ Zoning	Local Law	In Zoning	-	Locally Enforced	Local Law	Housing Code, Architectural/Historic Review, Site Plan Review
Fulton	Adopted	Local Law	In Zoning	In Zoning	In Zoning	Local Law	In Zoning	Local Law	Locally Enforced	Local Law	Freshwater Wetlands, Noise, Abandoned Vehicles, Excavations, Site Plan Review

Table 2.9 - Fire Departments in Oswego County		
Fire Department	Jurisdiction	Address
Defiance Volunteer Fire Dept.	(T) Albion	15 Bridge St., Altmar, NY 13302
West Amboy Volunteer Fire Co.	(T) Amboy	10 Cusson Dr, West Monroe, NY 13167
Central Square Volunteer Fire Co.	(V) Central Square	687 N Main St, Central Square, NY 13036
Cleveland Volunteer Fire Co.	(V) Cleveland	31 West St, Cleveland, NY 13042
Constantia Volunteer Fire Dept.	(T) Constantia	23 Mill St, Constantia, NY 13044
Fulton Fire Dept.	(C) Fulton (two stations)	700 W Broadway, Fulton, NY 13069 (west side)
		1 Tower Dr Fulton, NY 13069 (east side)
Cody Volunteer Fire Dept.	(T) Granby (two stations)	155 County Rte 55 Fulton, NY 13069
		31 Wilcox Rd, Fulton, NY 13069
Granby Center Fire Dept.	(T) Granby	1400 County Rte 8, Fulton, NY 13069
Caughdenoy Volunteer Fire Dept.	(T) Hastings	48 Prospect St, Central Square, NY 13036
	(T) Schroepfel	1046 CR 12, Pennellville, NY 13132
Hannibal Fire Co.	(V) Hannibal	155 Oswego St, Hannibal, NY 13074
Hastings Fire Dept.	(T) Hastings	1994 US-11, Hastings, NY 13076
Lacona Volunteer Fire Co.	(V) Lacona	34 Maple Ave, Lacona, NY 13083
Mexico Volunteer Fire Co.	(V) Mexico	3284 Main St, Mexico, NY 13114
Minetto Volunteer Fire Corp.	(T) Minetto	12 Barrett Dr, Minetto, NY 13115
New Haven Volunteer Fire Dept.	(T) New Haven	4211 NY-104, New Haven, NY 13121
Orwell Fire Co.	(T) Orwell	2000 County Rt 2 Orwell, NY 13426
Oswego City Fire Dept.	(C) Oswego (two stations)	35 E Cayuga St, Oswego, NY 13126 (east side)
		90 W 1st St, Oswego, NY 13126 (west side)
Palermo Volunteer Fire Dept.	(T) Palermo	4170 NY-3, Fulton, NY 13069
Parish Volunteer Fire Co.	(V) Parish	16 Union St, Parish, NY 13131
Pennellville Volunteer Fire Dept.	(T) Schroepfel	3 Godfrey Rd, Pennellville, NY 13132
Ringgold Fire Co.	(V) Pulaski	12 Lake St, Pulaski, NY 13142
Redfield Fire Dept.	(T) Redfield	4879 County Rt 17 Redfield, New York 13437
Richland Volunteer Fire Dept.	(T) Richland	30 Phillips St Richland, NY 13144
Sandy Creek Volunteer Fire Dept.	(V) Sandy Creek	6026 S Main St, Sandy Creek, NY 13145
Scriba Volunteer Fire Dept.	(T) Scriba	5618 NY-104, Oswego, NY 13126
Volney Volunteer Fire Co.	(T) Volney (two stations)	3002 NY-3, Fulton, NY 13069
		13 March Rd, Oswego, NY 13126
Williamstown Fire Dept.	(T) Williamstown	575 NY-13, Williamstown, NY 13493
West Monroe Volunteer Fire Dept.	(T) West Monroe	54 County Rte 11, West Monroe, NY 13167
Oswego Town Volunteer Fire Dept.	(T) Oswego	640 CR 20, Oswego, NY 13126
Enterprise Fire Company No. 1	(V) Phoenix (two stations)	42 Elm St, Phoenix, NY 13135
		457 Main St, Phoenix, NY 13135
	(T) Lysander (Onondaga County-one station)	*Third station in (T) Lysander (Onondaga County)

Table 2.10 – Jurisdictions with Public Water Systems in Oswego County
Oswego County Economic Advancement Plan, 2017; NYSDOH, 2018; OCWA, 2018

Jurisdiction	Water Source
Town of Hannibal	Groundwater wells
Town of Mexico	Groundwater wells
Town of New Haven	Groundwater wells
Town of Orwell	Groundwater wells
Town of Richland	Groundwater wells
Town of Sandy Creek	Groundwater wells
Village of Cleveland	Groundwater wells
Village of Lacona	Groundwater wells
Village of Mexico	Groundwater wells
Village of Pulaksi	Groundwater wells
Village of Sandy Creek	Groundwater wells
City of Fulton	Groundwater wells; OCWA (emergency connection only)
Village of Phoenix	Groundwater wells; OCWA (emergency connection only)
City of Oswego	Lake Ontario; OCWA (emergency connection only)
Town of Scriba	Lake Ontario; OCWA (emergency connection only)
Town of Constantia	OCWA (Lake Ontario)
Town of Granby	OCWA (Lake Ontario)
Town of Hastings	OCWA (Lake Ontario)
Town of Minetto	OCWA (Lake Ontario)
Town of Oswego	OCWA (Lake Ontario)
Town of Schroepfel	OCWA (Lake Ontario)
Town of Volney	OCWA (Lake Ontario)
Town of West Monroe	OCWA (Lake Ontario)
Village of Central Square	OCWA (Lake Ontario)

Table 3.1 - Planning Mechanisms and Capabilities for Oswego County Jurisdictions

[illegible]

Planning Mechanism	Town of Albion	Town of Amboy	Town of Boylston	Village of Central Square	Village of Cleveland	Town of Constantia	City of Fulton	Town of Granby	Village of Hannibal	Town of Hannibal	Town of Hastings	Village of Lacona	Village of Mexico	Town of Mexico	Town of Minetto+	Town of New Haven	Town of Orwell	City of Oswego	Town of Oswego	Town of Palermo	Village of Parish	Town of Parish	Village of Phoenix	Village of Pulaski	Town of Redfield	Town of Richland	Village of Sandy Creek	Town of Sandy Creek	Town of Schroepel	Town of Scriba	Town of Volney	Town of West Monroe	Town of Williamstown	Oswego County		
Storm Drainage Maintenance Program					X	X	X	X	X	X	X	X	X	X		X	X	X				X	X	X		X	X	X	X	X	X	X		X		
Mutual Aid Agreements	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Studies/Reports																																				
Hazard Analysis/Risk Assessment	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Floodplain Maps	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hydraulic Studies										X													X		*						X					
Staff/Development																																				
Development Planner							X				X							X																X		
Building Code Official	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GIS and/or HAZUS Specialist																																			X	
Engineer/Public Works Official		X					X	X	X	X	X	X						X	X		X	X	X				X	X	X						X	
Local Floodplain Administrator	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Environmental Cons. Specialist																					X	X			X								X	X		
Public Information Official	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
+The Town of Minetto did not participate in the HMP update. Information included for the Town of Minetto was obtained from the Town's website and County records.																																				
*Indicates plan, ordinance, or report is currently in progress.																																				

Table 3.2 –Stakeholder List and Participation
Oswego County Hazard Mitigation Plan Update, 2018

Agency	Attended Kickoff Meeting (9/27/17)	Attended CEPA Update (12/12/17)	Provided Other Response
Oswego County EMO/EMS	X	X	
Oswego County Community Development, Planning, & Tourism		X	
Oswego County Legislature	X		
Oswego County Administration			
Oswego County Real Property			
Oswego County Fire Coordinator	X	X	
Oswego County Sheriff's Office		X	
Oswego County E-911 Communications Center		X	
Oswego County Highway Dept.			
Oswego County Health Dept.		X	
Oswego County Office for the Aging			
Oswego County Dept. of Social Services			
Oswego County Youth Bureau/Parks and Recreation			
FEMA Region II	X		
NYSDHSES Region IV	X	X	
NYSDOT Region 3		X	
NWS- Buffalo Forecast Office			
Exelon Generation		X	
Brookfield Power			
National Grid	X	X	
American Red Cross			
Port of Oswego Authority			
SUNY Oswego		X	
Cayuga Community College - Fulton Campus			
CiTi BOCES			
Onondaga County Metropolitan Water Board			
U.S. Coast Guard			
NY Sea Grant			
Oswego County Soil & Water Conservation District	X		
Jefferson County			
Lewis County			
Madison County			
Onondaga County			
Cayuga County			
North Shore Council of Governments			
NYS Police			
Sunoco			

Table 4.3 - Presidential Disaster Declarations including Oswego County, 1972-Present (FEMA, Data Visualization: Disaster Declarations for States and Counties, 2018)					
Declaration Date	Incident Period	Event	Disaster Number	Public Assistance Category	Individual Assistance for Oswego County
11/14/2017	5/2/2017-8/6/2017	Flooding	4348	PA-A, B, C, D, E, F, G	No
10/28/2012	10/27/2012-11/9/2012	Hurricane Sandy	3351	PA-B	No
2/23/2007	2/2/2007-2/12/2007	Snow	3273	PA-B	No
9/30/2005	8/29-10/1/2005	Hurricane Katrina Evacuation	3262	PA-B	No
3/3/2004	1/28/2004-1/31/2004	Snow	3195	PA-B	No
8/3/2004	5/13-6/17/2004	Severe Storms and Flooding	1534	No Public Assistance for Oswego County	No
8/23/2003	8/14-8/16/2003	Power Outage	3186	PA-B	No
5/12/2003	4/3/2003-4/5/2003	Ice Storm	1467	PA-A, B, C, D, E, F, G	Yes
9/11/2001	9/11/2001	Fires and Explosions (New York Terrorist Attack)	1391	PA-B	No
10/11/2000	5/22/2000-11/1/2000	West Nile Virus	3155	PA-B	No
3/17/1993	3/13-3/17/1993	Severe Blizzard	3107	PA-A, PA-B	No
3/20/1985	3/20/1985	Flooding	733	PA-A, B, C, D, E, F, G	No
10/2/1975	10/2/1975	Storms, Rains, Landslides, and Flooding	487	PA-A, B, C, D, E, F, G	Yes
7/23/1974	7/23/1974	Severe Storms and Flooding	447	PA-A, B, C, D, E, F, G	Yes
3/21/1973	3/21/1973	High Winds, Wave Action, and Flooding	367	PA-A, B, C, D, E, F, G	Yes
6/23/1972	6/23/1972	Tropical Storm Agnes	338	PA-A, B, C, D, E, F, G	Yes

*Public assistance funding categories are as follow

Emergency Work

- PA-A Debris removal
- PA-B Emergency protective measures

Permanent Work

- PA-C Roads and bridges
- PA-D Water control facilities
- PA-E Public buildings and contents
- PA-F Public utilities
- PA-G Parks, recreational, and other facilities

Table 5.1. Beaufort Wind Scale

Force	Wind Speed (Knots)	WMO Classification	Appearance on Land
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Twigs breaking off trees, generally impedes progress
9	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	-
12	64+	Hurricane	-

Table 5.2. TORRO Hailstorm Intensity Scale
(TORRO, 2019)

Intensity Category		Typical Hail Diameter (mm)	Probable Kinetic Energy, J-m ²	Typical Damage Impacts
H0	Hard Hail	5	0-20	No damage
H1	Potentially Damaging	5-15	>20	Slight general damage to plants, crops
H2	Significant	10-20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60	-	Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75	-	Severe roof damage, risk of serious injuries
H8	Destructive	60-90	-	(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100	-	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100	-	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Table 5.3. Enhanced Fujita Scale
(NOAA, Storm Prediction Center, Enhanced F-Scale)

Table 5.3. Enhanced Fujita Scale (NOAA, Storm Prediction Center, Enhanced F-Scale)						
Fujita Scale			Derived EF Scale		Operational EF Scale	
F Number	Fastest ¼-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018

(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Oswego County	12/9/2009	High Wind	52 kts	0	0	\$150,000	-
Oswego County	5/8/2010	High Wind	50 kts	0	0	\$100,000	-
Fulton, City	6/16/2010	Thunderstorm Wind	58 kts	0	0	-	-
Palermo, Town	6/28/2010	Tornado	EF 0	0	0	\$50,000	-
Central Square, Village	7/17/2010	Hail	1 inch	0	0	\$5,000	\$5,000
Hastings, Town	7/17/2010	Hail	1 inch	0	0	\$5,000	\$5,000
Fulton, City	7/21/2010	Thunderstorm Wind	52 kts	0	0	\$15,000	-
Redfield, Town	9/28/2010	Thunderstorm Wind	56 kts	0	0	\$10,000	-
West Monroe, Town	4/26/2011	Thunderstorm Wind	51 kts	0	0	\$20,000	-
Constantia, Town	7/26/2011	Thunderstorm Wind	52 kts	0	0	\$10,000	-
Hastings, Town	7/26/2011	Thunderstorm Wind	52 kts	0	0	\$8,000	-
West Monroe, Town	7/26/2011	Thunderstorm Wind	52 kts	0	0	\$8,000	-
Hastings, Town	7/26/2011	Thunderstorm Wind	60 kts	0	0	\$10,000	-
Fulton, City	8/10/2011	Thunderstorm Wind	52 kts	0	0	\$10,000	-
Oswego County	8/28/2011	High Wind	50 kts	0	0	\$20,000	-
Oswego County	10/15/2011	High Wind	52 kts	0	0	\$10,000	-
Oswego County	1/17/2012	High Wind	60 kts	0	0	\$10,000	-
Volney, Town	1/17/2012	Thunderstorm Wind	51 kts	0	0	\$50,000	-
Oswego County	2/25/2012	High Wind	55 kts	0	0	\$35,000	-
Oswego County	3/3/2012	High Wind	52 kts	0	0	\$20,000	-
Parish, Town	5/29/2012	Hail	0.88 inches	0	0	\$10,000	\$10,000
Hastings, Town	5/29/2012	Hail	1 inch	0	0	\$10,000	\$10,000
Parish, Town	5/29/2012	Hail	1 inch	0	0	\$5,000	\$5,000
Palermo, Town	5/29/2012	Hail	1.5 inches	0	0	\$10,000	\$10,000
Palermo, Town	5/29/2012	Hail	1.75 inches	0	0	\$8,000	\$8,000
Hastings, Town	5/29/2012	Hail	1.75 inches	0	0	\$10,000	\$10,000
Constantia, Town	5/29/2012	Thunderstorm Wind	50 kts	0	0	\$8,000	\$8,000
Hastings, Town	5/29/2012	Thunderstorm Wind	50 kts	0	0	\$8,000	\$8,000
Hastings, Town	5/29/2012	Thunderstorm Wind	50 kts	0	0	\$5,000	\$5,000
Granby, Town	5/29/2012	Thunderstorm Wind	50 kts	0	0	-	-
Palermo, Town	7/23/2012	Thunderstorm Wind	51 kts	0	0	\$10,000	-
Volney, Town	7/23/2012	Thunderstorm Wind	51 kts	0	0	\$15,000	-
Fulton, City	7/31/2012	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego, Town	7/31/2012	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Sandy Creek, Town	7/31/2012	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Volney, Town	7/31/2012	Thunderstorm Wind	50 kts	0	0	\$10,000	-

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Mexico, Town	8/5/2012	Thunderstorm Wind	52 kts	0	0	\$10,000	-
Minetto, Town	8/5/2012	Thunderstorm Wind	52 kts	0	0	\$12,000	-
Schroeppe, Town	8/5/2012	Thunderstorm Wind	52 kts	0	0	\$12,000	-
Granby, Town	9/8/2012	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego County	10/29/2012	High Wind	50 kts	0	0	\$200,000	-
Oswego County	1/20/2013	High Wind	67 kts	0	0	\$15,000	-
Oswego County	1/31/2013	High Wind	52 kts	0	0	\$10,000	-
Fulton, City	5/21/2013	Hail	0.75 inches	0	0	-	-
Hannibal, Town	5/22/2013	Hail	0.75 inches	0	0	-	-
Fulton, City	5/22/2013	Hail	0.75 inches	0	0	-	-
Granby, Town	5/22/2013	Hail	0.75 inches	0	0	-	-
Central Square, Village	5/22/2013	Hail	0.75 inches	0	0	\$10,000	-
Central Square, Village	5/22/2013	Hail	0.88 inches	0	0	-	-
Palermo, Town	5/22/2013	Hail	0.88 inches	0	0	\$5,000	-
Granby, Town	5/22/2013	Hail	1 inch	0	0	\$5,000	-
Hastings, Town	5/22/2013	Hail	1 inch	0	0	\$5,000	-
Constantia, Town	5/22/2013	Hail	1 inch	0	0	-	-
Hastings, Town	5/22/2013	Hail	1.25 inches	0	0	\$5,000	-
West Monroe, Town	5/22/2013	Hail	1.5 inches	0	0	\$10,000	-
Phoenix, Village	5/22/2013	Thunderstorm Wind	50 kts	0	0	-	-
Granby, Town	6/24/2013	Hail	1 inch	0	0	\$10,000	\$10,000
Fulton, City	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Hastings, Town	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Hastings, Town	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego, Town	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Pulaski, Village	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Central Square, Village	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Parish, Town	7/19/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Hastings, Town	9/1/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Schroeppe, Town	9/1/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego, Town	9/2/2013	Hail	0.75 inches	0	0	-	-
Oswego, Town	9/2/2013	Hail	1 inch	0	0	\$5,000	-
Oswego, Town	9/2/2013	Hail	1.25 inches	0	0	\$10,000	-
Albion, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Granby, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Hannibal, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018

(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Oswego, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Redfield, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
West Monroe, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Palermo, Town	9/2/2013	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Oswego, Town	9/2/2013	Thunderstorm Wind	52 kts	0	0	\$10,000	-
West Monroe, Town	9/11/2013	Hail	0.88 inches	0	0	-	-
Amboy, Town	9/11/2013	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Cleveland, Village	9/11/2013	Thunderstorm Wind	50 kts	0	0	\$8,000	-
Oswego County	11/1/2013	High Wind	50 kts	0	0	\$20,000	-
Oswego County	11/18/2013	High Wind	50 kts	1	0	\$20,000	-
Oswego, Town	5/13/2014	Hail	1 inch	0	0	\$15,000	\$50,000
Minetto, Town	5/13/2014	Hail	1.5 inches	0	0	\$10,000	-
Fulton, City	6/3/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Amboy, Town	6/3/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Palermo, Town	6/3/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Granby, Town	6/13/2014	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Mexico, Town	6/17/2014	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Granby, Town	6/24/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Constantia, Town	6/24/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Fulton, City	6/24/2014	Thunderstorm Wind	50 kts	0	0	\$25,000	-
Williamstown, Town	6/24/2014	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Palermo, Town	6/24/2014	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Granby, Town	7/8/2014	Thunderstorm Wind	55 kts	0	0	\$10,000	-
Albion, Town	7/8/2014	Thunderstorm Wind	55 kts	0	0	\$10,000	-
Scriba, Town	7/8/2014	Thunderstorm Wind	55 kts	0	0	\$18,000	-
Orwell, Town	7/8/2014	Thunderstorm Wind	55 kts	0	0	\$5,000	-
Palermo, Town	7/8/2014	Thunderstorm Wind	55 kts	0	0	\$10,000	-
Fulton, City	5/30/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Mexico, Town	5/30/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
New Haven, Town	5/30/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Williamstown, Town	5/30/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Palermo, Town	5/30/2015	Thunderstorm Wind	50 kts	0	0	\$35,000	-
Fulton, City	8/18/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Oswego, Town	8/18/2015	Thunderstorm Wind	50 kts	0	0	\$25,000	-
Central Square, Village	8/18/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018

(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Central Square, Village	8/18/2015	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Albion, Town	9/9/2015	Thunderstorm Wind	60 kts	0	0	\$45,000	-
Scriba, Town	9/9/2015	Thunderstorm Wind	60 kts	0	0	\$30,000	-
Oswego, Town	9/9/2015	Thunderstorm Wind	65 kts	0	0	\$35,000	-
Oswego County	10/28/2015	High Wind	55 kts	0	0	\$25,000	-
Oswego County	1/10/2016	High Wind	56 kts	0	0	\$45,000	-
Oswego County	1/10/2016	High Wind	59 kts	0	0	-	-
Oswego, Town	6/20/2016	Hail	0.75 inches	0	0	-	-
New Haven, Town	6/20/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego, Town	6/20/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Redfield, Town	6/20/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
West Monroe, Town	6/20/2016	Thunderstorm Wind	50 kts	0	0	\$25,000	-
Parish, Town	6/20/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Hannibal, Town	7/18/2016	Hail	1 inch	0	0	-	-
Schroepfel, Town	7/18/2016	Hail	1 inch	0	0	-	-
Granby, Town	8/13/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Mexico, Town	8/13/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Volney, Town	8/13/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Palermo, Town	8/13/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Redfield, Town	8/16/2016	Funnel Cloud	-	0	0	-	-
New Haven, Town	9/8/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Orwell, Town	9/10/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Constantia, Town	9/18/2016	Thunderstorm Wind	50 kts	0	0	\$20,000	-
Albion, Town	10/17/2016	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Williamstown, Town	10/17/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Parish, Town	10/17/2016	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Oswego County	1/11/2017	High Wind	50 kts	0	0	\$75,000	-
Oswego County	3/2/2017	High Wind	54 kts	0	0	\$25,000	-
Oswego County	3/8/2017	High Wind	53 kts	0	0	\$200,000	-
Albion, Town	5/1/2017	Thunderstorm Wind	52 kts	0	0	\$10,000	-
Oswego, Town	5/1/2017	Thunderstorm Wind	52 kts	0	0	\$8,000	-
Oswego, Town	5/1/2017	Thunderstorm Wind	52 kts	0	0	\$5,000	-
Albion, Town	5/18/2017	Hail	1.5 inches	0	0	-	-
Fulton, City	5/18/2017	Hail	1.5 inches	0	0	-	-
Fulton, City	5/18/2017	Hail	1.5 inches	0	0	-	-
Phoenix, Village	5/18/2017	Hail	1.5 inches	0	0	-	-

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Central Square, Village	5/18/2017	Hail	1.5 inches	0	0	\$20,000	-
Albion, Town	5/18/2017	Hail	1.75 inches	0	0	-	-
Palermo, Town	5/18/2017	Hail	1.75 inches	0	0	-	-
Central Square, Village	5/18/2017	Hail	1.75 inches	0	0	-	-
Volney, Town	5/18/2017	Hail	2 inches	0	0	\$15,000	-
Volney, Town	5/18/2017	Hail	2.5 inches	0	0	\$12,000	-
Mexico, Town	5/18/2017	Hail	2.5 inches	0	0	\$10,000	-
Palermo, Town	5/18/2017	Hail	2.5 inches	0	0	-	-
Cleveland, Village	5/18/2017	Thunderstorm Wind	52 kts	0	0	-	-
Constantia, Town	5/18/2017	Thunderstorm Wind	52 kts	0	0	-	-
West Monroe, Town	5/18/2017	Thunderstorm Wind	52 kts	0	0	-	-
Palermo, Town	5/18/2017	Thunderstorm Wind	52 kts	0	0	\$12,000	-
Sandy Creek, Town	5/30/2017	Hail	0.75 inches	0	0	-	-
Boylston, Town	6/18/2017	Thunderstorm Wind	50 kts	0	0	\$12,000	-
Lacona, Village	6/18/2017	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Amboy, Town	6/18/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Granby, Town	6/26/2017	Hail	1 inch	0	0	-	-
Hastings, Town	7/8/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Williamstown, Town	7/8/2017	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Amboy, Town	7/14/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Amboy, Town	7/14/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Hastings, Town	7/14/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Boylston, Town	8/4/2017	Thunderstorm Wind	50 kts	0	0	\$8,000	-
Oswego, Town	8/4/2017	Thunderstorm Wind	50 kts	0	0	\$8,000	-
Amboy, Town	8/12/2017	Hail	0.88 inches	0	0	\$10,000	-
Central Square, Village	8/12/2017	Hail	0.88 inches	0	0	\$10,000	-
Amboy, Town	8/12/2017	Hail	1 inch	0	0	\$10,000	-
Hannibal, Town	8/12/2017	Thunderstorm Wind	50 kts	0	0	\$8,000	-
Granby, Town	8/12/2017	Thunderstorm Wind	50 kts	0	0	-	-
Hastings, Town	8/12/2017	Thunderstorm Wind	50 kts	0	0	\$5,000	-
Constantia, Town	8/12/2017	Thunderstorm Wind	50 kts	0	0	-	-
Mexico, Town	8/22/2017	Thunderstorm Wind	50 kts	0	0	\$20,000	-
Redfield, Town	8/22/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Albion, Town	8/22/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Orwell, Town	8/22/2017	Thunderstorm Wind	50 kts	0	0	\$8,000	-

Table 5.4 – NOAA NCDC Severe Storm Event Records for Oswego County, July 2009 – April 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Magnitude	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Parish, Town	8/22/2017	Thunderstorm Wind	50 kts	0	0	\$8,000	-
Hannibal, Town	9/4/2017	Thunderstorm Wind	50 kts	0	0	\$12,000	-
Hannibal, Town	10/15/2017	Thunderstorm Wind	50 kts	0	0	\$10,000	-
Minetto, Town	10/15/2017	Thunderstorm Wind	50 kts	0	0	\$12,000	-
Mexico, Town	10/15/2017	Thunderstorm Wind	50 kts	0	0	\$15,000	-
Fulton, City	10/15/2017	Thunderstorm Wind	57 kts	0	0	-	-
Oswego County	10/30/2017	High Wind	57 kts	0	0	\$20,000	-
Oswego County	10/30/2017	High Wind	62 kts	0	0	\$20,000	-
Oswego County	4/4/2018	High Wind	52 kts	0	0	\$20,000	-

Table 5.5 Number and Structure Value* of Parcels Intersecting Mapped 100-Year and 500-Year Floodplains		
FEMA, 2013 and Oswego County Real Property Tax Office, 2018		
Jurisdiction	Number of Parcels Intersecting 100-Year Floodplain	Structure Value of Parcels Intersecting 100-Year Floodplain
Albion, Town	224	\$12,366,000
Amboy, Town	216	\$13,171,400
Boylston, Town	0	-
Central Square, Village	76	\$36,946,895
Cleveland, Village	75	\$4,938,000
Constantia, Town	984	\$97,810,463
Fulton, City	276	\$78,469,014
Granby, Town	807	\$99,663,000
Hannibal, Town	291	\$15,162,000
Hannibal, Village	39	\$11,591,400
Hastings, Town	669	\$83,741,512
Lacona, Village	27	\$2,065,863
Mexico, Town	436	\$35,978,364
Mexico, Village	108	\$44,739,182
Minetto, Town	109	\$24,190,980
New Haven, Town	313	\$26,084,800
Orwell, Town	85	\$25,456,800
Oswego, City	186	\$192,026,741
Oswego, Town	269	\$41,494,100
Palermo, Town	387	\$30,455,800
Parish, Town	124	\$11,658,440
Parish, Village	38	\$5,177,600
Phoenix, Village	121	\$12,333,425
Pulaski, Village	130	\$17,550,214
Redfield, Town	112	\$53,599,384
Richland, Town	586	\$62,227,688
Sandy Creek, Town	708	\$65,693,259
Sandy Creek, Village	26	\$3,047,600
Schroeppel, Town	662	\$54,529,563
Scriba, Town	453	\$1,795,121,399
Volney, Town	532	\$81,427,113
West Monroe, Town	520	\$57,567,501
Williamstown, Town	213	\$11,543,500
Oswego County Total	9802	\$3,107,829,000
**Structure Value estimated by subtracting parcel's Land Assessed Value from Total Assessed Value.		

Table 5.6 – NOAA NCDC Flood Event Records for Oswego County, September 2010 – November 2017 (NOAA, NCDC, Storm Events Search, 2018)						
Location	Date	Event	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Pulaski, Village	9/30/2010	Flood	0	0	\$5,000	-
Albion, Town	9/30/2010	Flood	0	0	\$5,000	-
Amboy, Town	9/30/2010	Flood	0	0	\$5,000	-
Granby, Town	9/30/2010	Flood	0	0	\$8,000	-
Constantia, Town	9/30/2010	Flood	0	0	\$8,000	-
Richland, Town	9/30/2010	Flood	0	0	\$5,000	-
Albion, Town	9/30/2010	Flood	0	0	\$12,000	-
Scriba, Town	9/30/2010	Flood	0	0	\$5,000	-
Mexico, Town	9/30/2010	Flood	0	0	\$8,000	-
Mexico, Town	9/30/2010	Flood	0	0	\$8,000	-
Redfield, Town	9/30/2010	Flood	0	0	\$10,000	-
Sandy Creek, Town	9/30/2010	Flood	0	0	\$8,000	-
Scriba, Town	9/30/2010	Flood	0	0	\$5,000	-
Parish, Town	9/30/2010	Flood	0	0	\$8,000	-
Fulton, City	5/11/2015	Flash Flood	0	0	\$100,000	-
Oswego County	8/1/2017	Coastal Flood	0	0	-	-
Oswego County	9/1/2017	Coastal Flood	0	0	-	-
Oswego County	10/1/2017	Coastal Flood	0	0	-	-
Oswego County	11/1/2017	Coastal Flood	0	0	-	-

Table 5.7 Sperry-Piltz Ice Accumulation Index

The Sperry-Piltz Ice Accumulation Index, or “SPIA Index” – Copyright, February, 2009

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 – 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

(Categories of damage are based upon combinations of precipitation totals, temperatures and wind speeds/directions.)

Table 5.8. Regional Snowfall Index
(NOAA, 2019)

Category	RSI Value	Description
1	1-3	Notable
2	3-6	Significant
3	6-10	Major
4	10-18	Crippling
5	Over 18	Extreme

Table 5.9 – NOAA NCDC Ice Storm Event Records for Oswego County (NOAA, NCDC, Storm Events Search, 2018)					
Location	Date	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Oswego County	12/22/1997	0	0	\$15,000	-
Oswego County	4/4/2003	0	0	\$3,000,000	\$750,000
Oswego County	4/14/2018	0	0	\$15,000	-

Table 5.10 – NOAA NCDC Severe Winter Storm Event Records for Oswego County, December 2009 – March 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Deaths (#)	Injuries (#)	Property Damage (\$)
Oswego County	12/10/2009	Lake-Effect Snow	0	0	\$25,000
Oswego County	12/16/2009	Lake-Effect Snow	0	0	\$15,000
Oswego County	12/28/2009	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/1/2010	Lake-Effect Snow	0	0	\$25,000
Oswego County	1/1/2010	Lake-Effect Snow	0	0	\$25,000
Oswego County	1/26/2010	Lake-Effect Snow	0	0	\$15,000
Oswego County	2/25/2010	Winter Storm	0	0	\$20,000
Oswego County	12/5/2010	Lake-Effect Snow	0	0	\$20,000
Oswego County	12/13/2010	Lake-Effect Snow	0	0	\$40,000
Oswego County	1/4/2011	Lake-Effect Snow	0	0	\$30,000
Oswego County	1/5/2011	Lake-Effect Snow	0	0	\$30,000
Oswego County	1/15/2011	Lake-Effect Snow	0	0	\$35,000
Oswego County	1/21/2011	Lake-Effect Snow	0	0	\$25,000
Oswego County	2/9/2011	Lake-Effect Snow	0	0	\$50,000
Oswego County	2/25/2011	Winter Storm	0	0	\$20,000
Oswego County	11/17/2011	Lake-Effect Snow	0	0	\$8,000
Oswego County	12/10/2011	Lake-Effect Snow	0	0	\$15,000
Oswego County	12/28/2011	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/2/2012	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/13/2012	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/19/2012	Winter Storm	0	0	\$25,000
Oswego County	1/30/2012	Lake-Effect Snow	0	0	\$25,000
Oswego County	2/12/2012	Lake-Effect Snow	0	0	\$15,000
Oswego County	11/25/2012	Lake-Effect Snow	0	0	\$15,000
Oswego County	12/21/2012	Winter Storm	0	0	\$13,000
Oswego County	12/26/2012	Winter Storm	0	0	\$15,000
Oswego County	1/20/2013	Lake-Effect Snow	0	0	\$10,000
Oswego County	1/21/2013	Lake-Effect Snow	0	0	\$20,000
Oswego County	2/1/2013	Lake-Effect Snow	0	0	\$10,000
Oswego County	2/3/2013	Lake-Effect Snow	0	0	\$10,000
Oswego County	2/8/2013	Heavy Snow	0	0	\$25,000
Oswego County	2/19/2013	Lake-Effect Snow	0	0	\$10,000
Oswego County	3/18/2013	Heavy Snow	0	0	\$15,000
Oswego County	3/19/2013	Lake-Effect Snow	0	0	\$15,000
Oswego County	11/26/2013	Winter Storm	0	0	\$15,000
Oswego County	12/10/2013	Lake-Effect Snow	0	0	\$14,000
Oswego County	12/14/2013	Winter Storm	0	0	\$9,000
Oswego County	12/15/2013	Lake-Effect Snow	0	0	\$8,000
Oswego County	12/18/2013	Lake-Effect Snow	0	0	\$9,000
Oswego County	12/26/2013	Lake-Effect Snow	0	0	\$9,000
Oswego County	12/31/2013	Lake-Effect Snow	0	0	\$10,000
Oswego County	1/2/2014	Heavy Snow	0	0	\$18,000
Oswego County	1/19/2014	Winter Storm	0	0	\$10,000

Table 5.10 – NOAA NCDC Severe Winter Storm Event Records for Oswego County, December 2009 – March 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Deaths (#)	Injuries (#)	Property Damage (\$)
Oswego County	1/27/2014	Lake-Effect Snow	0	0	\$25,000
Oswego County	2/5/2014	Heavy Snow	0	0	\$20,000
Oswego County	2/10/2014	Lake-Effect Snow	0	0	\$20,000
Oswego County	2/13/2014	Winter Storm	0	0	\$15,000
Oswego County	2/24/2014	Lake-Effect Snow	0	0	\$15,000
Oswego County	2/26/2014	Lake-Effect Snow	0	0	\$15,000
Oswego County	3/12/2014	Blizzard	0	0	\$48,000
Oswego County	11/13/2014	Lake-Effect Snow	0	0	\$15,000
Oswego County	11/17/2014	Lake-Effect Snow	0	0	\$300,000
Oswego County	11/20/2014	Lake-Effect Snow	0	0	\$150,000
Oswego County	12/10/2014	Winter Storm	0	0	\$25,000
Oswego County	12/30/2014	Lake-Effect Snow	0	0	\$45,000
Oswego County	1/4/2015	Lake-Effect Snow	0	0	\$50,000
Oswego County	1/6/2015	Lake-Effect Snow	0	0	\$35,000
Oswego County	2/1/2015	Winter Storm	0	0	\$20,000
Oswego County	2/12/2015	Lake-Effect Snow	0	0	\$25,000
Oswego County	2/14/2015	Winter Storm	0	0	\$20,000
Oswego County	10/18/2015	Lake-Effect Snow	0	0	\$10,000
Oswego County	12/18/2015	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/1/2016	Lake-Effect Snow	0	0	\$20,000
Oswego County	1/10/2016	Lake-Effect Snow	0	0	\$30,000
Oswego County	1/12/2016	Lake-Effect Snow	0	0	\$35,000
Oswego County	1/17/2016	Lake-Effect Snow	0	0	\$30,000
Oswego County	2/10/2016	Lake-Effect Snow	0	0	\$20,000
Oswego County	2/15/2016	Winter Storm	0	0	\$15,000
Oswego County	11/20/2016	Lake-Effect Snow	0	0	\$50,000
Oswego County	12/8/2016	Lake-Effect Snow	0	0	\$25,000
Oswego County	12/10/2016	Lake-Effect Snow	0	0	\$15,000
Oswego County	12/13/2016	Lake-Effect Snow	0	0	\$20,000
Oswego County	12/15/2016	Blizzard	0	0	\$100,000
Oswego County	12/29/2016	Lake-Effect Snow	0	0	\$25,000
Oswego County	1/4/2017	Lake-Effect Snow	0	0	\$14,000
Oswego County	1/26/2017	Lake-Effect Snow	0	0	\$20,000
Oswego County	2/1/2017	Lake-Effect Snow	0	0	\$25,000
Oswego County	2/2/2017	Lake-Effect Snow	0	0	\$34,000
Oswego County	2/12/2017	Heavy Snow	0	0	\$15,000
Oswego County	3/14/2017	Winter Storm	0	0	\$100,000
Oswego County	11/19/2017	Lake-Effect Snow	0	0	\$20,000
Oswego County	12/10/2017	Lake-Effect Snow	0	0	\$35,000
Oswego County	12/12/2017	Winter Storm	0	0	\$25,000
Oswego County	12/15/2017	Lake-Effect Snow	0	0	\$35,000
Oswego County	12/24/2017	Lake-Effect Snow	0	0	\$125,000
Oswego County	12/29/2017	Lake-Effect Snow	0	0	\$25,000

Table 5.10 – NOAA NCDC Severe Winter Storm Event Records for Oswego County, December 2009 – March 2018 (NOAA, NCDC, Storm Events Search, 2018)					
Location	Date	Event	Deaths (#)	Injuries (#)	Property Damage (\$)
Oswego County	1/1/2018	Lake-Effect Snow	0	0	\$35,000
Oswego County	1/2/2018	Blizzard	0	0	\$35,000
Oswego County	1/12/2018	Winter Storm	0	0	\$35,000
Oswego County	2/3/2018	Lake-Effect Snow	0	0	\$30,000
Oswego County	2/8/2018	Lake-Effect Snow	0	0	\$20,000
Oswego County	3/2/2018	Winter Storm	0	0	\$40,000
Oswego County	3/13/2018	Winter Storm	0	0	-

Table 5.11 – NOAA NCDC Extreme Temperature Event Records for Oswego County, October 2009 – January 2018
(NOAA, NCDC, Storm Events Search, 2018)

Location	Date	Event	Deaths (#)	Injuries (#)	Property Damage (\$)	Crop Damage (\$)
Oswego County	10/12/2009	Frost/Freeze	0	0	-	-
Oswego County	5/11/2010	Frost/Freeze	0	0	-	\$15,000
Oswego County	1/24/2011	Extreme Cold/Wind Chill	0	0	-	-
Oswego County	10/27/2011	Frost/Freeze	0	0	-	-
Oswego County	4/2/2012	Frost/Freeze	0	0	-	-
Oswego County	4/5/2012	Frost/Freeze	0	0	-	-
Oswego County	4/5/2012	Frost/Freeze	0	0	-	-
Oswego County	4/13/2012	Frost/Freeze	0	0	-	-
Oswego County	4/18/2012	Frost/Freeze	0	0	-	-
Oswego County	4/27/2012	Frost/Freeze	0	0	-	-
Oswego County	4/29/2012	Frost/Freeze	0	0	-	-
Oswego County	10/12/2012	Frost/Freeze	0	0	-	-
Oswego County	5/14/2013	Frost/Freeze	0	0	-	-
Oswego County	10/28/2013	Frost/Freeze	0	0	-	-
Oswego County	2/13/2016	Extreme Cold/Wind Chill	0	0	-	-
Oswego County	1/5/2018	Extreme Cold/Wind Chill	0	0	-	-

Table 5.12 – Ice Jam Event Records for Oswego County (USACE, CRREL, 2018)			
Date	Location	Water	Details
1/7/1915	Village of Altmar (Town of Albion)	Orwell Brook	USGS gage height affected by ice jam at Orwell Brook.
2/18/1916	Village of Altmar (Town of Albion)	Orwell Brook	USGS gage height affected by ice jam at Orwell Brook.
1/3/1952	City of Oswego	Oswego River	Ice affected stage heights at multiple locations along Oswego River, banks not subject to overflow.
3/21/2003	Town of Redfield	Salmon River	USGS reported high flows due to ice jam on Salmon R, North Branch.
1/20/2004	Town of Minetto	Oswego River	NYSEMO reported an ice jam near Minetto that lasted over 2 weeks, constricted flow to Lake Ontario.
1/20/2004	City of Fulton	Oswego River	NYSEMO reported ice jam between Fulton and Phoenix, hydroelectric plant control gates are frozen, rise in water levels on Oneida and Seneca Rivers.
1/14/2014	Town of Sandy Creek	North Sandy Pond	NYSEMO reported an ice jam causing high water on North Sandy Pond, which resulted in flooding west of Route 3 in the Town of Sandy Creek along the shore of Lake Ontario.

Table 5.13 - Dam Hazard Potential Classification

NYSDEC Dam Classification	Description
Class A – Low Hazard	A dam failure is unlikely to result in damage to anything more than isolated or unoccupied buildings, undeveloped lands, minor roads such as town or country roads; is unlikely to result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; and/or is otherwise unlikely to pose the threat of personal injuring, substantial economic loss or substantial environmental damage.
Class B – Moderate Hazard	A dam failure may result in damage to isolated homes, main highways, and minor railroads; may result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable, or telephone infrastructure; and/or is otherwise likely to pose the threat of personal injury and/or substantial economic loss or substantial environmental damage. Loss of human life is not expected.
Class C – High Hazard	A dam failure may result in widespread or serious damage to home (s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such as the loss of human life or widespread substantial economic loss is likely.
Class D – Negligible or No Hazard	A dam that has been breached or removed, or has failed or otherwise no longer materially impounds waters, or a dam that was planned but never constructed. Class "D" dams are considered to be defunct dams posing negligible or no hazard. The department may retain pertinent records regarding such dams.

Table 6.1 - Oswego County Critical Facilities				
Facility	Facility Type	Location	Parcel in Floodplain	Structure(s) in Floodplain
Oswego County Airport	Airport	40 Airport Dr, Fulton	100YR	No
McFee Ambulance	Ambulance	52 Watson Ave, Mexico	No	No
North Shore Ambulance	Ambulance	136 Bridge St, Cleveland	No	No
Northern Oswego County Ambulance (NOCA)	Ambulance	21 Delano St, Pulaski	No	No
Oswego County Ambulance Service (Menter's Ambulance)- Central Square	Ambulance	8 Gertrude Dr, Central Square	No	No
Oswego County Ambulance Service (Menter's Ambulance)- Fulton	Ambulance	404 Oneida St, Fulton	100YR, 500YR	100YR, 500YR
Oswego County Ambulance Service (Menter's Ambulance)- Oswego	Ambulance	35 E. Cayuga St, Oswego	No	No
SAVAC SUNY Oswego	Ambulance	53 Sheldon Ave, Oswego, NY 13126	No	No
Cayuga Community College (Fulton Campus)	Education	11 River Glen Dr, Fulton	No	No
Center for Instruction, Innovation and Technologies (CITI, formerly BOCES)	Education	179 CR 64, Mexico	No	No
SUNY Oswego Campus	Education	7060 NY Rt. 104, Oswego	100YR, 500YR	No
Alternate county EOC at Oswego Fire Dept., Eastside Station	Emergency	35 E. Cayuga St, Oswego	No	No
Alternate E-911 Center at Oswego County Office Building	Emergency	200 N. Second St., Fulton	No	No
Exelon Joint Information Center	Emergency	4 Airport Dr, Fulton (Town of Volney)	No	No
Oswego County Emergency Operations Center	Emergency	200 N. Second St., Fulton	No	No
Oswego County Emergency Response Training Center (ERTC/Fire Coordinator's Office)	Emergency	720 E. Seneca St., Oswego	100YR	No
Oswego County Fairgrounds	Fairgrounds	9261 County Rt 22A, Sandy Creek, NY 13145	100YR	No
County Buildings & Grounds	Government	111 E. 11th St., Oswego	100YR, 500YR	100YR, 500YR
County Courthouse- Pulaski	Government	2 Broad St, Pulaski, NY 13142	No	No
County Legislative Office Building	Government	46 E. Bridge St., Oswego	No	No
NY State Barge Canal	Government	1 Canal View Dr, Oswego. Locks in Oswego (3), Minetto, Fulton (2)	-	-
Oswego County Dept. of Social Services	Government	100 Spring St, Mexico	No	No
Oswego County Health Department	Government	70 Bunner St, Oswego	No	No
Port of Oswego Authority	Government	1 E. Second St, Oswego	100YR, 500YR	No
U.S. Customs and Border Patrol Station	Government	19 E. Schuyler St, Oswego	No	No
County Highway Dept	Highway Dept.	31 Schaad Dr, Oswego	100YR and 500YR	No
County Highway Dept	Highway Dept.	957 Centerville Rd, Richland	100YR, 500YR	No
County Highway Dept (radiological Personnel Monitoring Center)	Highway Dept.	39 Dill Pickle Alley, Parish	No	No
Oswego Hospital (Oswego Health)	Medical	110 W. Sixth St., Oswego	No	No
US Army Reserve Center	Military	60 E. 9th St, Oswego	No	No
US Coast Guard Station	Military	1 Lake St, Oswego	100YR, 500YR	No
NYS Dept. of Transportation	NYSDOT	NY-104 at I-81, Parish	No	No
NYS Dept. of Transportation	NYSDOT	NY-3, Granby	No	No
NYS Dept. of Transportation (County maintenance residency)	NYSDOT	5855 Scenic Ave, Mexico	No	No
NY State Police	Police	1013 S. 1st. St, Fulton	No	No
NY State Police	Police	1134 US-11, Central Square, NY 13036	No	No
NY State Police	Police	3273 County Rt 2, Pulaski, NY 13142	100YR, 500YR	No
Oswego County Public Safety Center (E-911 Center, Sheriff's Department, Correctional Facility)	Police	39 Churchill Rd, Oswego	No	No
City of Oswego Lake Water Pumping and Treatment Station	Public Utility	30 Sheldon Ave, Oswego	100YR, 500YR	No
Exelon Emergency Offsite Facility	Public Utility	County Route 176, Fulton (Town of Volney)	No	No
Metropolitan Water Board (MWB) Lake Water Pumping and Treatment Station and Pipeline	Public Utility	1633 Rathburn Rd (treatment plant)	No	No
Onondaga County Water Authority pipelines in Oswego County	Public Utility	throughout County	-	-
Camp Hollis	Recreation	40 Health Camp Rd, Oswego, NY 13126	100YR, 500YR	No
NYS Department of Environmental Conservation Training Center	Training Facility	24 CR 2A, Pulaski	100YR, 500YR	No

Table 6.2 - Potential Emergency Shelter Locations in Oswego County		
Jurisdiction	Emergency Shelter Location	Shelter Address
Albion, Town	Albion Municipal Building	15 Bridge St, Altmar, NY 13302
Amboy, Town	Amboy 4-H Environmental Education Center	748 NY-183, Williamstown, NY 13493
	West Amboy Community Church	CR 26
	Amboy Town Hall	822 NY-69, Williamstown, NY 13493
	Panther Lake Association	off of CR 175
	West Amboy Volunteer Fire Dept.	CR 26, 10 Cusson Dr West Monroe, NY
Boylston, Town	Boylston Town Hall	580 CR 13, Lacona, NY
	Mad River Club	941 CR 15, Lacona, NY
Central Square, Village	Paul V. Moore High School	44 School Dr, Central Square, NY 13036
Cleveland, Village	Cleveland United Methodist Church	73 Bridge St, Cleveland, NY 13042
Constantia, Town	A. A. Cole Elementary School	1683 NY-49 Constantia, NY 13044
Fulton, City	Fulton War Memorial	609 West Broadway, Fulton, NY 13069
Granby, Town	Granby Community Center	CR 8, Fulton, NY 13069
Granby, Town	Granby Elementary School	W 7th St, Fulton, NY 13069
Hannibal, Town and Village	Kenney Middle School	846 Cayuga St, Hannibal, NY 13074
	Hannibal High School	928 Cayuga St, Hannibal, NY 13074
Hastings, Town	Paul V. Moore High School	44 School Dr, Central Square, NY 13036
Lacona, Village	Lacona Fire Dept.	34 Maple Ave, Lacona, NY 13083
Mexico, Town and Village	Mexico High School	3338 Main St, Mexico, NY 13114
	Mexico Middle School	16 Fravor Rd, Mexico, NY 13114
	Mexico Elementary School	26 Academy St, Mexico, NY 13114
	Mexico VFW	5930 Scenic Ave, Mexico, NY 13114
New Haven, Town	New Haven Elementary School	4320 NY-104, New Haven, NY 13121
Orwell, Town	Orwell Fire Hall	2000 CR 2, Orwell, NY 13426
	Greater Victory Fellowship Church	2056 CR 2, Orwell, NY 13426
Oswego, City	SUNY Oswego- Laker Hall	Barnes Dr, Oswego, NY 13126
Oswego, Town	Oswego Town Hall	2320 CR 7, Oswego, NY 13126
Palermo, Town	Palermo United Methodist Church	11 County Rte 35, Fulton, NY 13069
Parish, Town	Parish Volunteer Fire Co.	16 Union St, Parish, NY 13131
Parish, Village	Parish Village Gym	2938 E. Main St, Parish, NY 13131
Phoenix, Village	Main St Fire Dept.	457 Main St, Phoenix, NY 13135
	John C. Birdlebough High School	552 Main St, Phoenix, NY 13135
Pulaski, Village	American Legion	3350 Maple Ave, Pulaski, NY 13142
	Lura Sharp Elementary School	2 Hinman Rd, Pulaski, NY 13142
	Pulaski Jr/Sr High School	4624 Salina St, Pulaski, NY 13142
Redfield, Town	Redfield Town Hall	4830 CR 17, Redfield, NY 13437
	Redfield Fire Dept.	4879 CR 17, Redfield, NY 13437
Richland, Town	American Legion	3350 Maple Ave, Pulaski, NY 13142
	Lura Sharp Elementary School	2 Hinman Rd, Pulaski, NY 13142
	Pulaski Jr/Sr High School	4624 Salina St, Pulaski, NY 13142
Sandy Creek, Town	Sandy Creek Central School	124 Salisbury St, Sandy Creek, NY 13145
	Sandy Creek Town Hall	1992 Harwood Dr, Sandy Creek, NY 13145
	Sandy Pond Sportsman's Club	3201 CR 15, Sandy Creek, NY 13145
Sandy Creek, Village	Sandy Creek Fire Dept.	6026 S Main St, Sandy Creek, NY 13145
Schroepfel, Town	Schroepfel Town Hall	69 CR 57A, Phoenix, NY 13135
	Pennellville Fire Dept.	3 Godfey Rd, Pennellville, NY 13132
	Pennellville United Methodist Church	389 County Rte 54, Pennellville, NY 13132
Scriba, Town	Scriba Town Hall	42 Creamery Rd, Oswego, NY 13126
Volney, Town	Volney Town Hall	1445 CR 6, Fulton, NY 13069
	Volney Fire Dept.	3992 NY-3, Fulton, NY 13069
West Monroe, Town	West Monroe Volunteer Fire Dept.	54 CR 11, West Monroe, NY 13167
Williamstown, Town	Williamstown Fire Dept.	575 NY-13, Williamstown, NY 13493
	William Britton Community Center	2910 B CR 17, Williamstown, NY 13493
	American Legion Post 1128	8 Vida Dr, Williamstown, NY 13493

Table 6.6 - Total Assessed Values of Properties in Oswego County
(Oswego County Dept. of Community, Planning and Tourism, 2018)

Jurisdiction	Total Assessed Value of Parcels
Albion, Town	\$100,572,602
Amboy, Town	\$73,126,178
Boylston, Town	\$41,755,600
Central Square, Village	\$121,634,465
Cleveland, Village	\$32,201,192
Constantia, Town	\$262,305,063
Fulton, City	\$432,193,258
Granby, Town	\$277,569,988
Hannibal, Town	\$122,966,638
Hannibal, Village	\$30,004,600
Hastings, Town	\$367,204,938
Lacona, Village	\$23,685,899
Mexico, Town	\$197,717,929
Mexico, Village	\$107,073,212
Minetto, Town	\$110,015,510
New Haven, Town	\$150,279,518
Orwell, Town	\$108,321,531
Oswego, City	\$1,114,540,390
Oswego, Town	\$274,302,600
Palermo, Town	\$146,684,453
Parish, Town	\$113,077,638
Parish, Village	\$26,205,528
Phoenix, Village	\$81,298,831
Pulaski, Village	\$117,001,232
Redfield, Town	\$82,156,654
Richland, Town	\$213,791,637
Sandy Creek, Town	\$227,509,963
Sandy Creek, Village	\$41,560,176
Schroepfel, Town	\$250,563,583
Scriba, Town	\$2,138,378,716
Volney, Town	\$315,623,846
West Monroe, Town	\$230,037,826
Williamstown, Town	\$74,981,566
Total	\$8,006,342,760

Table 7.1 - Status of 2012 Oswego County Mitigation Actions											
2012 Mitigation Actions	Hazard(s) Mitigated	2012 Goals and Objectives Met	Potential Implementing Agency	Estimated Cost Level	Funding Source	Implementation Timeframe	New or Existing Structures	Prioritization	Status	Status Notes	Re-Included in HMP Update
Alert community of locations of shelters and procedures during emergency events	All hazards	1-d	County EMO, County Office of Public Information	Low	County funds	Short	N/A	High	Ongoing	This is an ongoing, general function of the County's EMS department.	No
Enhance current tree removal program executed by National Grid	Utility Failure	3-b, 3-c, 4-b	National Grid, Town and Village Planning Boards (lead)	Medium	National Grid, County funds	Moderate	New and Existing	Low	No Action	No action to date. County does not have input on any clearing program executed by private utility companies.	Yes
Review/implement County regulations and insurance regulations on floodplain management requirements	Flood	1-b, 3-a, 4-a, 4-b, 4-d	Oswego County Planning and all municipalities	Low	County budget & municipal budget	Short	New	High	Ongoing	This is an ongoing task completed by the County Planning Dept.	No
Provide training on NY Alert system	All hazards	1-c	County EMO	Low	County budget	Short	N/A	High	No Action	No action to date.	No
Review current agreement for County to access/service private roads – enhance as needed	Severe storm, ice storm, flood, wildfire, winter storm	1-c, 5-e	Private landowners (lead), Municipal Highway/DPW depts.	Low	Private	Short	New and Existing	Low	No Action	No action to date- determined to be unfeasible. The County does not have agreements in place to serve private roads.	No
Inform private road residents of current access/service agreement within County	Severe storm, ice storm, flood, wildfire, winter storm	1-c, 5-e	Municipal DPW/Highway	Low	County funds	Short	New and Existing	Low	No Action	No action to date- determined to be unfeasible. The County does not have agreements in place to serve private roads.	No
Provide maintenance for historic lighthouse in Oswego – reinforce break wall	Severe storm, Flood	4-d, 4-e	County Community Development, USACE, City Oswego	High	State Parks grant, Enviro. Protection Fund	Long	Existing	Moderate	In Progress	In progress. The foundation of the lighthouse is owned by the USACE, and structures above are owned by the City of Oswego. The County is not involved with the breakwalls. USACE recently reinforced one breakwall in Oswego but not the one at the lighthouse. Any improvements to the lighthouse breakwall would have to be undertaken directly by the USACE.	No
Coordinate with NYS Flood Mitigation Group regarding repetitious flooding issues within Oswego County	Flood	4-d	County EMO (lead), municipal floodplain administrators	Low	County funds	Moderate	Existing	High	Ongoing	This is an ongoing action completed by the County EMO.	No
Coordinate with US Army Corps regarding ways to reduce Oneida Lake flooding issues affected by Barge Canal system	Flood	4-d	County EMO, FEMA, NYSOEM, Canal Corps	Low	FEMA, County funds	Long	Existing	Moderate	Ongoing	Ongoing action- County coordinates with USACE and NYS Canal Corp.	No
Educate public on Hyper-reach capabilities and uses	All hazards	1-c, 1-d, 5-b	County EMO, E911, County Promotion and Tourism Dept.	Low	County budget	Short	N/A	High	Ongoing	This is an ongoing action that could benefit from more attention. Many residents are no longer using land-line phones, and cell phone numbers are not automatically enrolled in the Hyper-Reach Program.	Yes

Table 7.1 - Status of 2012 Oswego County Mitigation Actions											
2012 Mitigation Actions	Hazard(s) Mitigated	2012 Goals and Objectives Met	Potential Implementing Agency	Estimated Cost Level	Funding Source	Implementation Timeframe	New or Existing Structures	Prioritization	Status	Status Notes	Re-Included in HMP Update
Inventory County and municipal equipment availability	All hazards	2-a	County EMO, County Office of Fire Coordinator, Municipal DPWs and Highway Depts.	Medium	County funds	Short	N/A	High	Ongoing	This is an ongoing action that is completed by each County department individually.	No
Continue work to increase availability of broadband throughout County to improve communications	All hazards	5-c	County Planning Dept. (lead), utility companies	Low	Capital budget	Short-Long	New and Existing	Moderate	Ongoing	This is an ongoing action, but is led by private utility companies. Spectrum and Frontier have expanded their services throughout the County and worked with the County Planning Dept. in the process.	No
Continue to inventory aging transportation infrastructure within County	Ice storm, flood, ice jam, hazmat (in transit)	5-f	County DPW and Highway (lead), NYSDOT, Town/Village Highway/DPW	Medium	FHWA, NYSDOT, County budget	Short-Long	New and Existing	High	Ongoing	This is an ongoing action that is completed by each County department individually.	No
Coordinate with NYS Thruway regarding ways to distribute hazard event information to Thruway travelers	All hazards	5-c	County EMO, NYSOEM, Thruway Authority, NYSDOT	Low	State grant, Private, County budget	Long	N/A	Moderate	Complete	The NYSDOT completed this action- message boards are now located along the NYS Thruway and Interstate 81.	No
Review response plan of communities located within Hancock flight paths – revise as needed	All hazards	5-e	Municipal Boards, FAA, County EMO and emergency response (lead)	Low	Federal grant, State grant	Long	N/A	High	No Action	This was a concern in 2012 for Oneida Lake communities. No action has been completed to date.	No
Continue EEE spraying program in County as needed – evaluate program effectiveness on an annual basis.	Epidemic	5-e	County DOH	High	County budget	Short-Long	N/A	Moderate	Ongoing	This is an ongoing action that is completed annually by the County Health Dept.	No
Implement aid and liability agreements with local ATV clubs to assist during emergencies	All hazards	2-c	Municipal Boards, ATV clubs	Medium	Municipal budget, Private	Long	New and Existing	Low	No Action	This action is not feasible for the County to complete- agreements regarding aid to local emergency responders would be made between the clubs and respective local municipalities. The County Planning Dept. works with ATV and snowmobile clubs regarding access and maintenance along trails.	No
Implement aid and liability agreements with local HAM operators to assist during emergencies	All hazards	2-c	County EMO, RACES, local operators groups	Medium	Municipal budget, Private	Moderate	New and Existing	High	Ongoing	This is an ongoing action, though there is no formal agreement in place between the County and local HAM operators. The operators tend to be ready on an as-needed basis.	No
Add additional emergency response trailers along I-81 corridor	All hazards	3-d	County Office Fire Coordinator, NYSDOT	High	State budget, State grant	Long	N/A	Low	Complete	This action was completed in 2015. NYSDOT traffic trailers were set up along Interstate 81. The trailers have equipment to use during hazard events requiring road closures.	No
Improve cell phone reception and GPS function within County	All hazards	5-c	Phone companies, County legislature	Low	Private	Short-Long	New and Existing	Moderate	Ongoing	This is an ongoing action as telecommunication utility companies continue to expand and improve service throughout the County.	No
Review emergency evacuation signage within I-81 corridor communities – establish such signage if needed	Severe storm, ice storm, earthquake, tornado, flood, wildfire, winter storm, coastal storm, landslide, terrorism, hazmat (transit)	5-c, 5-e	County EMO, Municipal Boards and Highway/DPW, NYSDOT	Medium	State grant, County budget	Short	New and Existing	Low	Ongoing	While the NYSDOT established emergency signage along Interstate 81 since the 2012 HMP was completed, signage is still lacking on main roadways throughout the County that connect to I-81. The County has established sign layouts, detour routes and plans to have an emergency evacuation plan approved and in place by Winter 2019.	No

Table 7.1 - Status of 2012 Oswego County Mitigation Actions											
2012 Mitigation Actions	Hazard(s) Mitigated	2012 Goals and Objectives Met	Potential Implementing Agency	Estimated Cost Level	Funding Source	Implementation Timeframe	New or Existing Structures	Prioritization	Status	Status Notes	Re-Included in HMP Update
Develop database of special needs and elderly individuals within County and a system to contact them in case of emergency – update database annually	All hazards	5-b	County DOH, County Office for the Aging (lead)	Medium	State grant, Private, County budget	Long	New and Existing	High	Ongoing	This action, as written in 2012, was determined to not be feasible at the County level. The County does not have sufficient funding or staff to complete this. The County revised this action to include in the HMP update.	Yes

Table 7.2. Proposed Mitigation Actions Oswego County									
Action ID	Mitigation Action	Hazard(s) Mitigated	Assumed Implementing Agencies (lead* & support)	Planning Mechanism	Timeframe	New or Existing Development	Estimated Cost	Funding Source(s)	Priority
Oswego County 1	Acquire a generator for the Parish and Pulaski County Highway Garages	Severe Thunderstorm/Wind/ Tornado, Utility Failure	County Highway Dept*	County Capital Improvement Plan	2 years	Existing	\$175,000	FEMA- PDM	1 (High)
Oswego County 2	Acquire generators for the Oswego County Airport to power office building, runway lights, gates, and fuel pumps	Severe Thunderstorm/Wind/ Tornado, Utility Failure	County Highway Dept*, Oswego County Airport	County Capital Improvement Plan	2 years	Existing	\$125,000	FEMA- PDM	2 (High)
Oswego County 3	Oswego County Airport flood mitigation project	Flood	County Highway Dept*, Oswego County Airport	County Capital Improvement Plan	2 years	Existing	\$1.2 million	FEMA- PDM	3 (Medium)
Oswego County 4	Research methods to develop database of contact info/develop formal plan for agency coordination to contact vulnerable individuals (elderly, special needs) during emergencies.	All	County EMO*, County Health Dept, County Office for the Aging	Emergency Response Plan	1 year, update annually	N/A	Low	County Budget	4 (Medium)
Oswego County 5	Increase public awareness of Hyper-Reach Program and encourage residents to opt-in to the program with their cell phone numbers. This will increase the number of people notified during a hazard event.	All	County EMO*, E-911, County Promotion and Tourism	Emergency Response Plan	1 year	N/A	Low	County Budget	5 (Medium)
Oswego County 6	County Highway Dept.to identify hot spot areas for tree clearing/maintenance and communicate with private utility companies.	Ice Storm, Severe Thunderstorm/Wind/Tornado, Severe Winter Storm	County Highway Dept*	County Capital Improvement Plan	2 years	Existing	Medium	County Budget	6 (Medium)
Oswego County 7	Acquire a generator for the Oswego County Department of Social Services	Severe Thunderstorm/Wind/Tornado, Utility Failure	County Dept. of Social Services*	County Capital Improvement Plan	2 years	Existing	\$100,000	FEMA- PDM	7 (Medium)
Oswego County 8	Develop an Emerald Ash Borer Management Plan	Infestation	County EMO*, Oswego County SWCD	County Capital Improvement Plan	2 years	N/A	\$20,000	County Budget	8 (Low)
Oswego County 9	Public sewer system for Sandy Pond properties	Flood	County EMO*, Town of Sandy Creek Supervisor	County Capital Improvement Plan	1-2 years	Existing	\$12 million or more	FEMA- PDM; NYSEFC-CWSRF; USDA-RD	9 (Low)
Oswego County 10	Continue EEE mosquito monitoring program in County as needed.	Epidemic	Oswego County Health Dept.*	County Capital Improvement Plan	1 year	N/A	High	County Budget	10 (Low)
Oswego County 11	Develop property resilience brochure and provide to all jurisdictions for local input and distribution.	Severe Thunderstorm/Wind/Tornado, Flooding, Severe Winter Storm, Ice Storm	County EMO*	Emergency Response Plan	6 months	Existing	\$1,000	County Budget	11 (Medium)

Funding Sources

FEMA PDM: <https://www.fema.gov/pre-disaster-mitigation-grant-program>

USDA-RD Water & Waste Disposal Loan & Grant Program: <https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program/ny>

NYSEFC CWSRF: <https://www.efc.ny.gov/CWSRF>

Table 8.1 - NFIP Policy Statistics as of July 31, 2018 for Oswego County, NY
(FEMA, NFIP, 2018)

Municipality	Number of Policies	Total Insurance	Total Premiums
Altmar, Village (Albion, Town)	1	\$84,000.00	\$841.00
Amboy, Town	2	\$210,600.00	\$521.00
Boylston, Town	1	\$350,000.00	\$373.00
Central Square, Village	4	\$618,700.00	\$3,442.00
Cleveland, Village	8	\$1,725,600.00	\$6,600.00
Constantia, Town	32	\$4,973,600.00	\$32,393.00
Fulton, City	12	\$1,603,500.00	\$11,184.00
Granby, Town	13	\$2,355,800.00	\$6,711.00
Hannibal, Town	2	\$280,000.00	\$537.00
Hannibal, Village	1	\$105,000.00	\$352.00
Hastings, Town	43	\$8,153,500.00	\$33,492.00
Mexico, Town	16	\$2,850,700.00	\$9,702.00
Mexico, Village	1	\$175,000.00	\$402.00
Minetto, Town	12	\$1,198,900.00	\$9,267.00
New Haven, Town	4	\$838,200.00	\$2,318.00
Orwell, Town	1	\$350,000.00	\$498.00
Oswego, City	22	\$3,434,300.00	\$13,224.00
Oswego, Town	4	\$760,000.00	\$1,796.00
Parish, Town	2	\$630,000.00	\$803.00
Phoenix, Village	12	\$2,576,600.00	\$10,253.00
Pulaski, Village	17	\$3,528,700.00	\$22,380.00
Redfield, Town	5	\$439,000.00	\$4,306.00
Richland, Town	17	\$3,597,600.00	\$10,646.00
Sandy Creek, Town	25	\$5,361,900.00	\$21,115.00
Schroeppel, Town	59	\$7,804,300.00	\$52,481.00
Scriba, Town	15	\$2,307,800.00	\$12,563.00
Volney, Town	7	\$2,096,000.00	\$5,432.00
West Monroe, Town	50	\$8,906,800.00	\$40,932.00

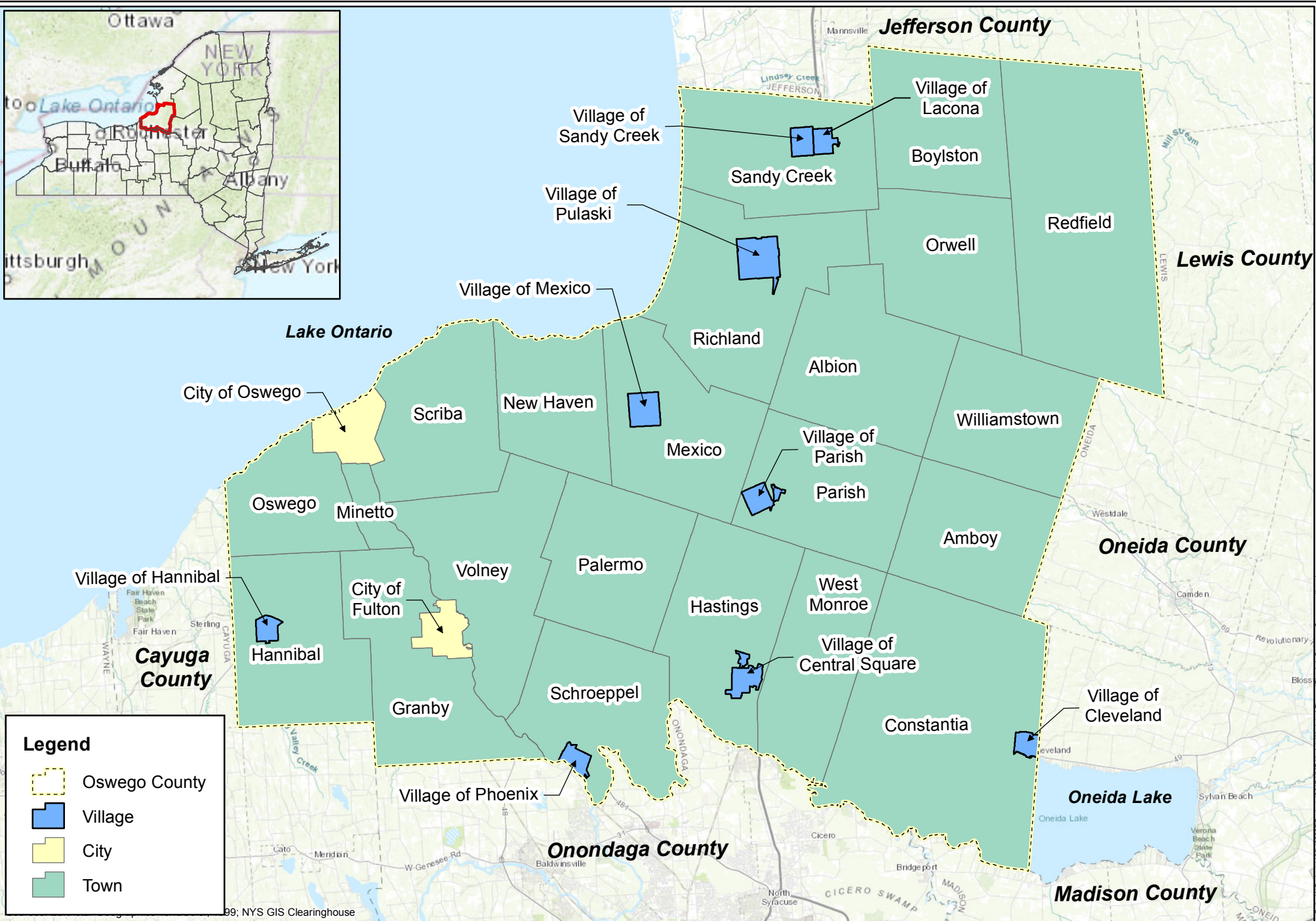
Table 8.2 - NFIP Claims Statistics as of July 30, 2018 for Oswego County, NY
(FEMA, NFIP, 2018)

Municipality	Total Losses	Closed Losses	Open Losses	Closed without Payment	Total Payments
Albion, Town	1	0	0	1	\$0.00
Altmar, Village (Albion, Town)	9	8	0	1	\$77,513.56
Central Square, Village	5	3	0	2	\$8,830.15
Cleveland, Village	33	28	0	5	\$195,060.65
Constantia, Town	16	12	0	4	\$145,089.16
Fulton, City	11	7	0	4	\$18,567.56
Granby, Town	1	1	0	0	\$5,164.25
Hastings, Town	10	6	0	4	\$36,876.22
Mexico, Town	8	3	0	5	\$88,886.19
Mexico, Village	9	6	0	3	\$9,315.91
Minetto, Town	4	3	0	1	\$394,973.14
New Haven, Town	1	0	0	1	\$0.00
Oswego, City	13	11	0	2	\$381,869.07
Oswego, Town	5	3	0	2	\$1,924.02
Parish, Town	3	1	0	2	\$9,937.36
Phoenix, Village	1	1	0	0	\$623.50
Pulaski, Village	9	6	0	3	\$32,481.82
Richland, Town	9	4	0	5	\$4,493.98
Sandy Creek, Town	24	11	2	11	\$137,638.72
Schroepfel, Town	21	13	0	8	\$45,444.16
Scriba, Town	13	10	0	3	\$89,099.59
Volney, Town	2	0	0	2	\$0.00
West Monroe, Town	20	15	0	5	\$106,180.25


Table 8.3 - Repetitive Losses as of 10/31/17 for Oswego County, NY
(FEMA, NFIP, 2017)

Municipality	NFIP Community Number	Building Payments	Content Payments	Total Payments	Average Payment	Number of Losses	Number of Properties	Property Types
Village of Altmar (Town of Albion)	360646	\$55,744.89	-	\$55,744.89	\$9,290.82	6	1	1 Single Family; which is a Severe RL property
Town of Constantia	360648	\$47,924.69	\$3,400.82	\$51,325.51	\$10,265.10	5	2	2 Single Family
Town of Hastings	360653	\$12,321.74	-	\$12,321.74	\$6,160.87	2	1	1 Single Family
City of Oswego	360656	\$211,552.82	\$106,594.64	\$318,147.46	\$79,536.87	4	1	1 Non-Residential Property
Town of West Monroe	360664	\$77,807.53	\$3,460.71	\$81,268.24	\$7,388.02	11	5	5 Single Family

Figures




Legend

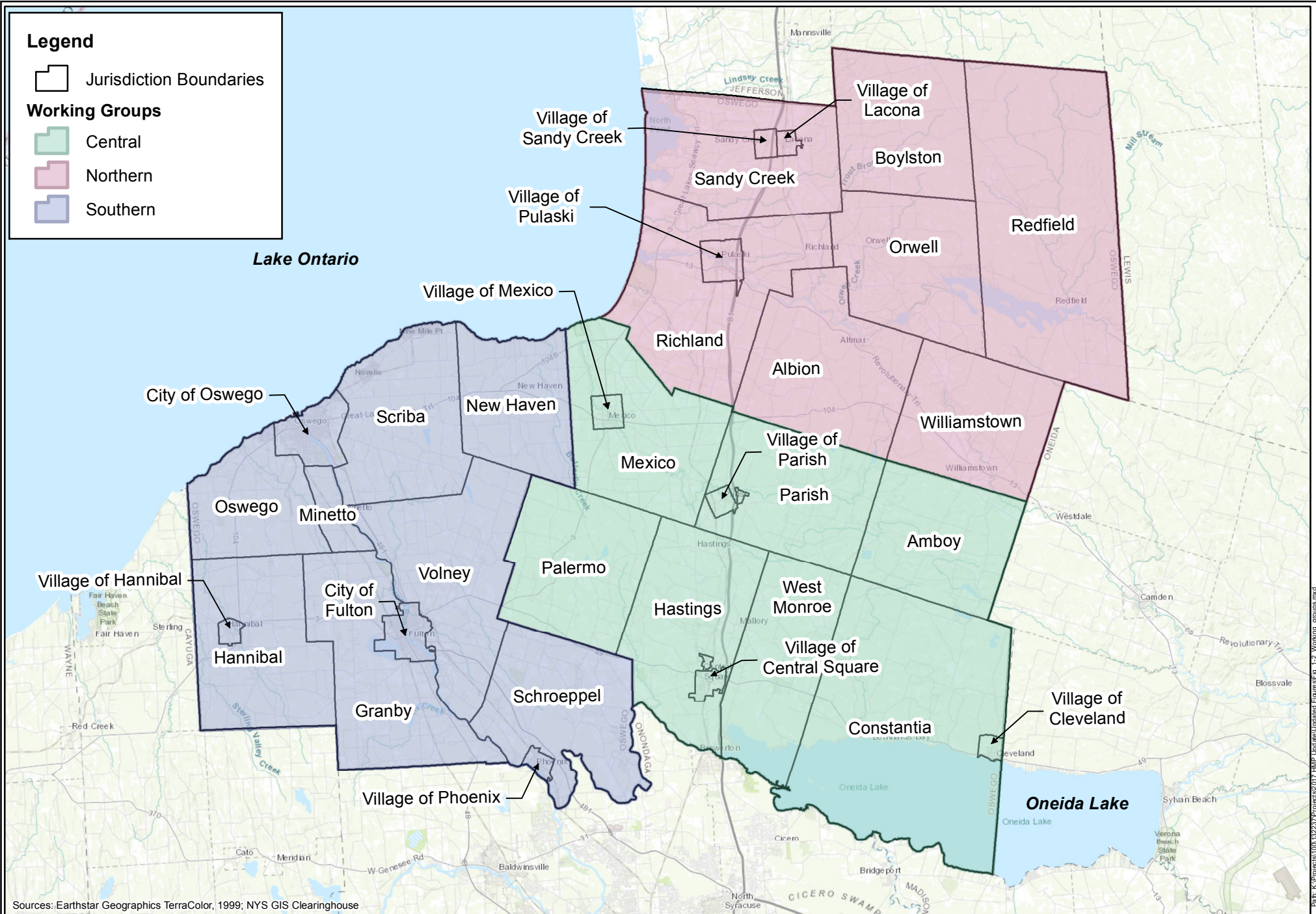
 Jurisdiction Boundaries

Working Groups

 Central

 Northern

 Southern



Sources: Earthstar Geographics TerraColor, 1999; NYS GIS Clearinghouse

Figure 2.1

Tug Hill Region of New York State



BOUNDARIES AND PLACES
County
Town
City
Tug Hill Village
Outlying Village
Unincorporated Place
Government Reservation
Bullseye Area (~25000)

BOUNDARIES AND PLACES (CONTINUED)
Tug Hill Boundary
CLASSIFICATION OF POPULATED PLACES
SYRACUSE
Utica
Watertown
Lowville
Glenfield

TRANSPORTATION
Highways
Divided Highways
Full Control Access
Partial or No Control of Access
Undivided Highway
Local Road
Interchange

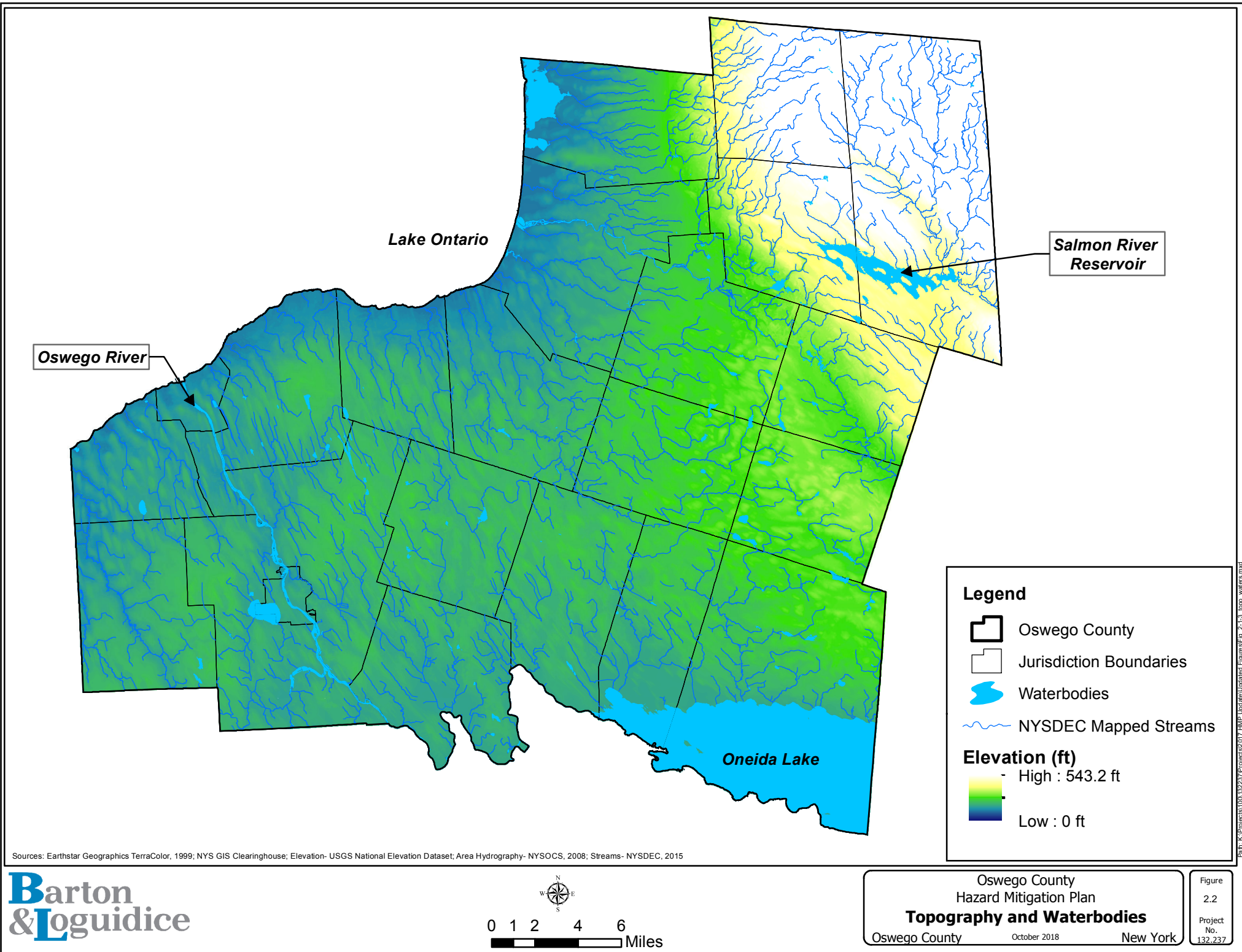
TRANSPORTATION (CONTINUED)
Railroads
Operating Line
Service Discontinued
Airports (Open to the Public, Military)
Runway under 4000'
Runway over 4000'

RECREATION FACILITIES
State or National Recreation Area
State Reforestation or Multiple Use Area
State Boat Launching Site

2.5 1.25 0 2.5 5 7.5 10
Miles
2 1 0 2 4 6 8
Kilometers


A THS GIS PRODUCT
NEW YORK STATE
TUG HILL COMMISSION

Basic Map Copyright © 1998 New York State Office of Cyber Security & Critical Infrastructure
This information was compiled for planning purposes and is NOT a survey product. It may not be reproduced or transmitted for commercial purposes or for any other purpose without the prior authorization of the NYS Tug Hill Commission. THS shall not be liable for misuse or misrepresentation of this information. THS makes no claim as to the accuracy or completeness of the data contained herein.



Legend


 Oswego County


 Jurisdiction
Boundaries

Land Use

 Agricultural

 Commercial

 Community Services

 Industrial

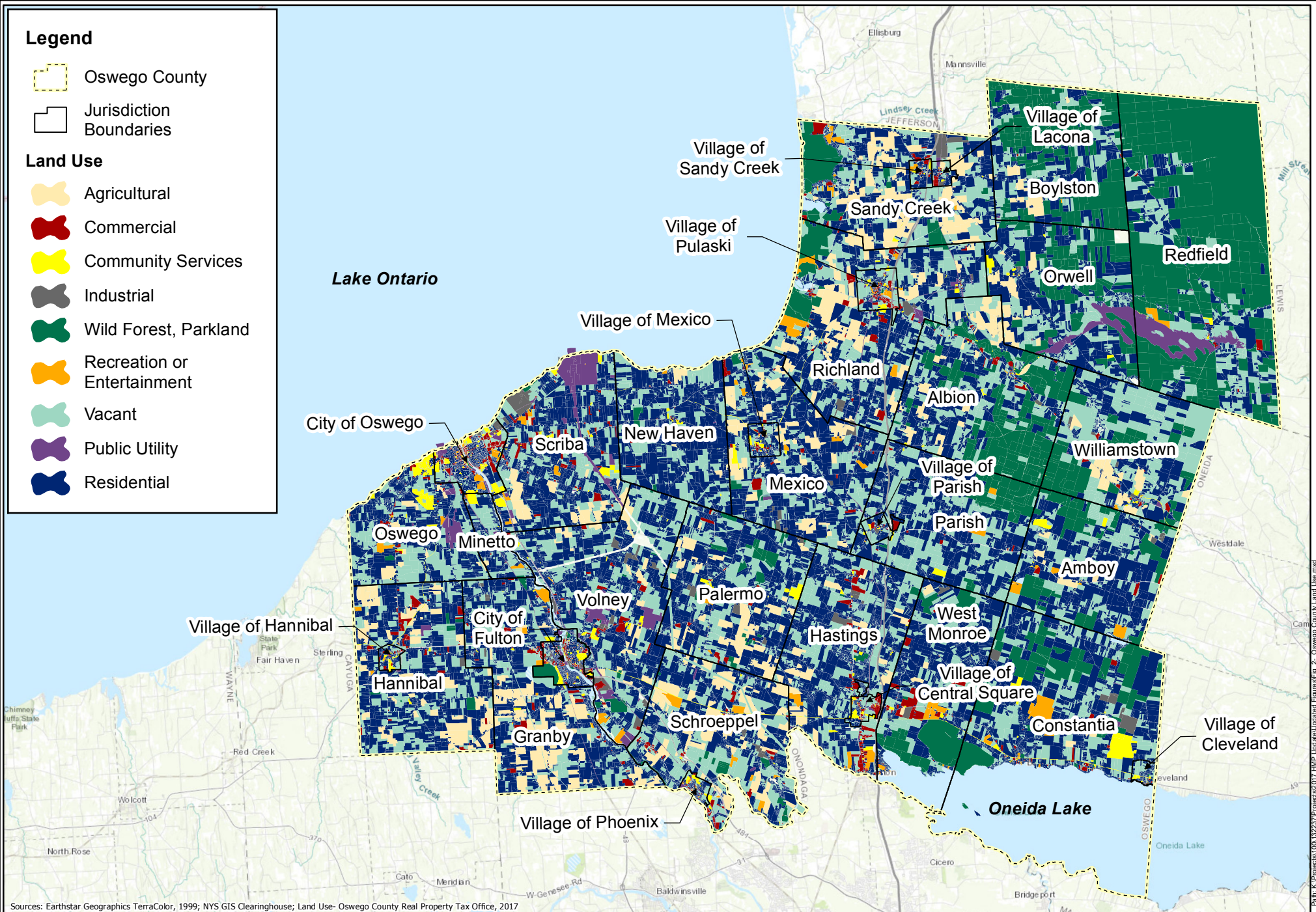
 Wild Forest, Parkland

 Recreation or
Entertainment

 Vacant

 Public Utility

 Residential



Sources: Earthstar Geographics TerraColor, 1999; NYS GIS Clearinghouse; Land Use- Oswego County Real Property Tax Office, 2017

**Barton
&Loguidice**



0 1 2 4 6
Miles

Oswego County
Hazard Mitigation Plan
Land Use

Oswego County




October 2018

New York

Figure
2.3

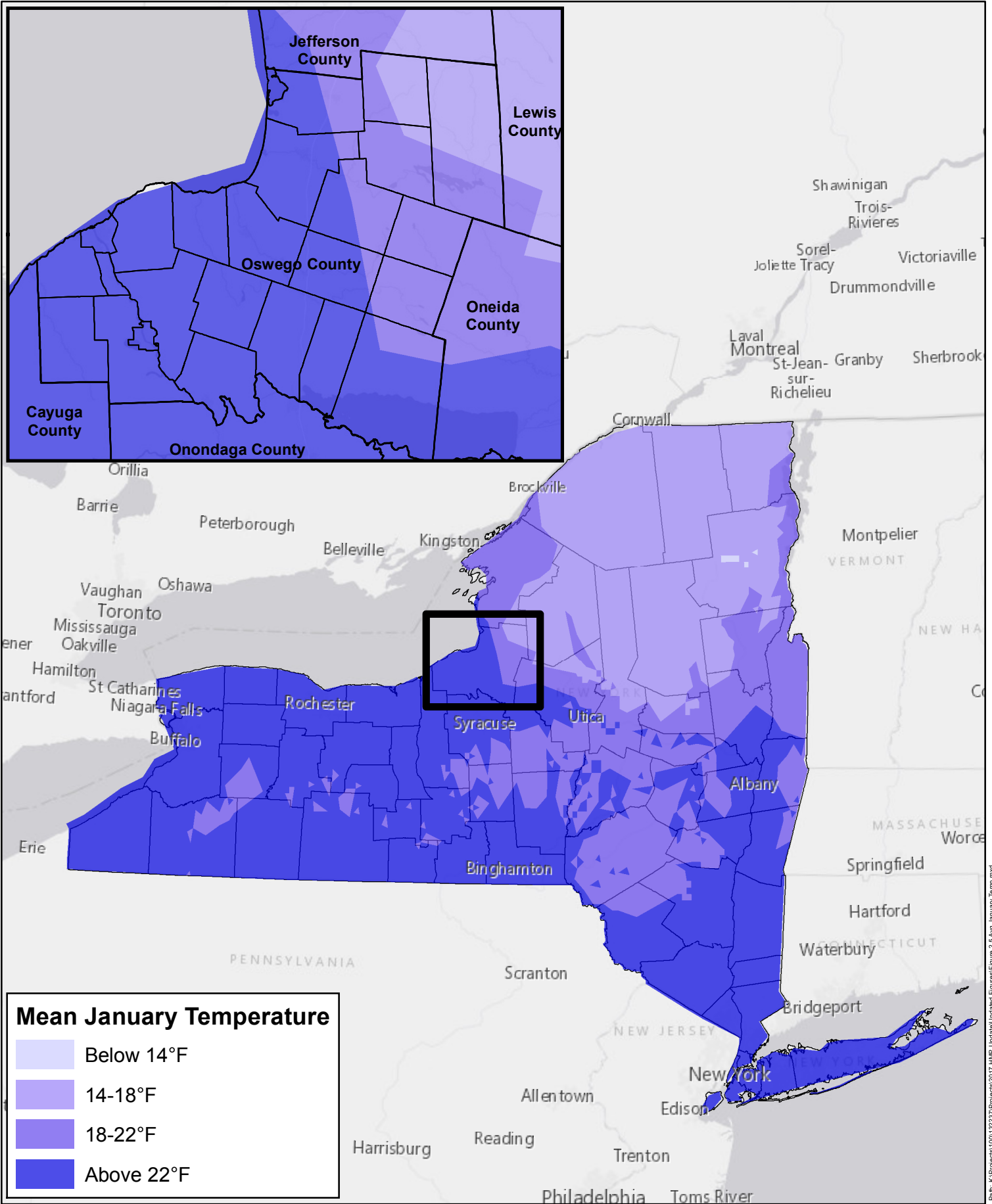
Project
No.
132.237

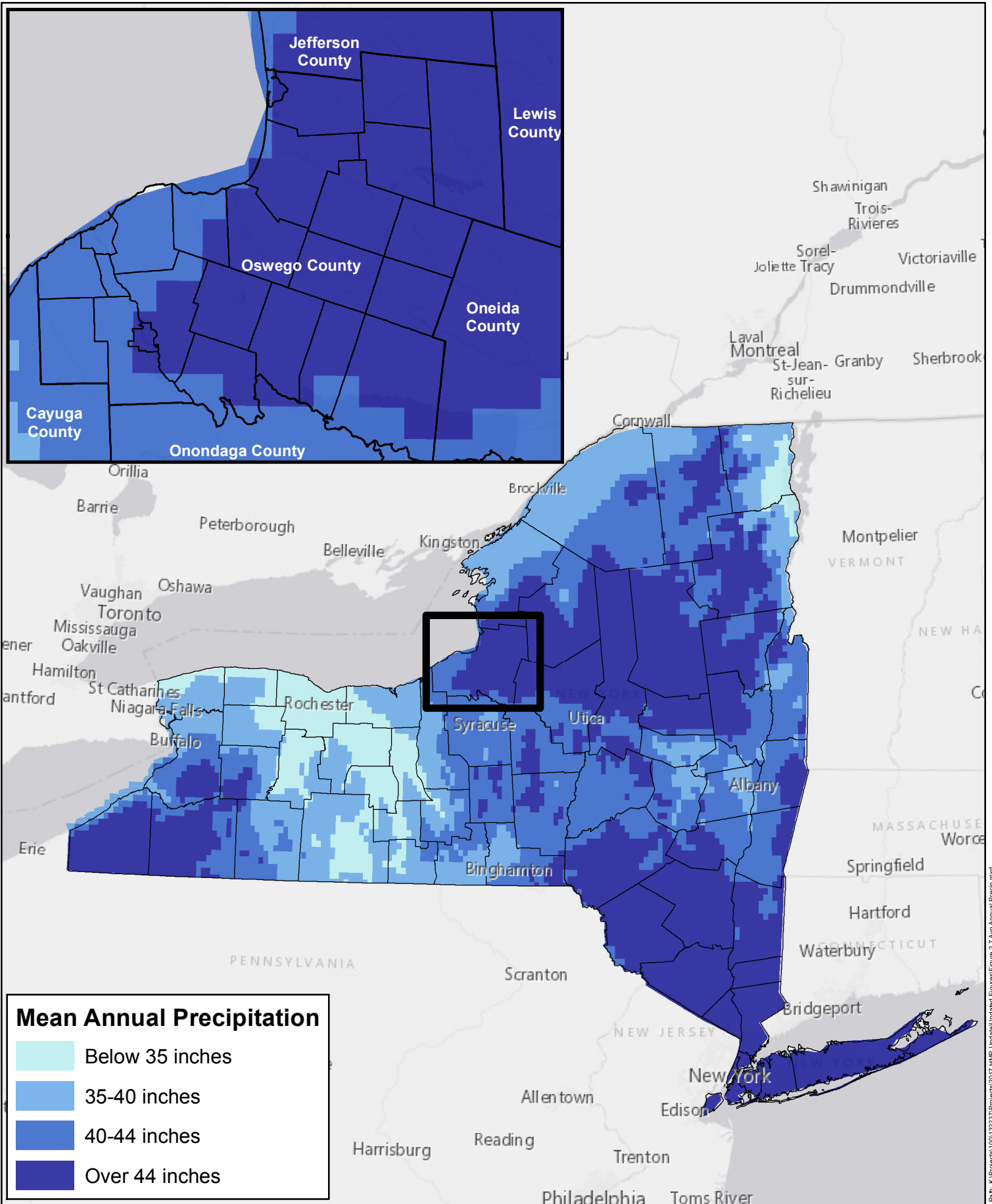
Legend

-  Oswego County
-  Jurisdiction Boundaries
-  Oswego County Agricultural District 11



Sources: Earthstar Geographics TerraColor, 1999; NYS GIS Clearinghouse; Agricultural District- NYSDAM, 2017





Legend



Airports

Active Railroads

Major Roadways

Interstate 81

U.S. Route 11

State Route

County Route

Major Waterbodies

Oswego County

Jurisdiction Boundaries



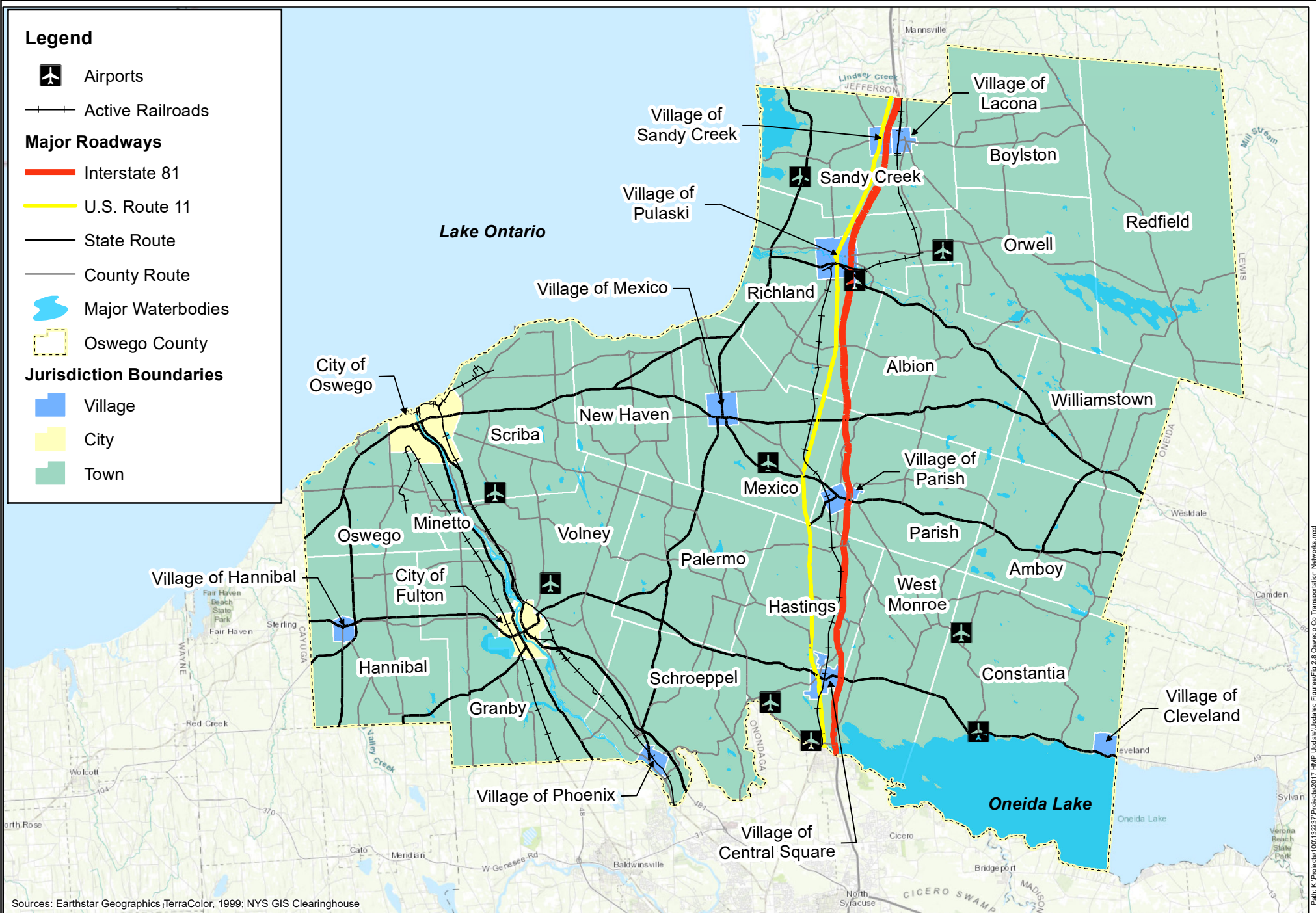
Village



City



Town



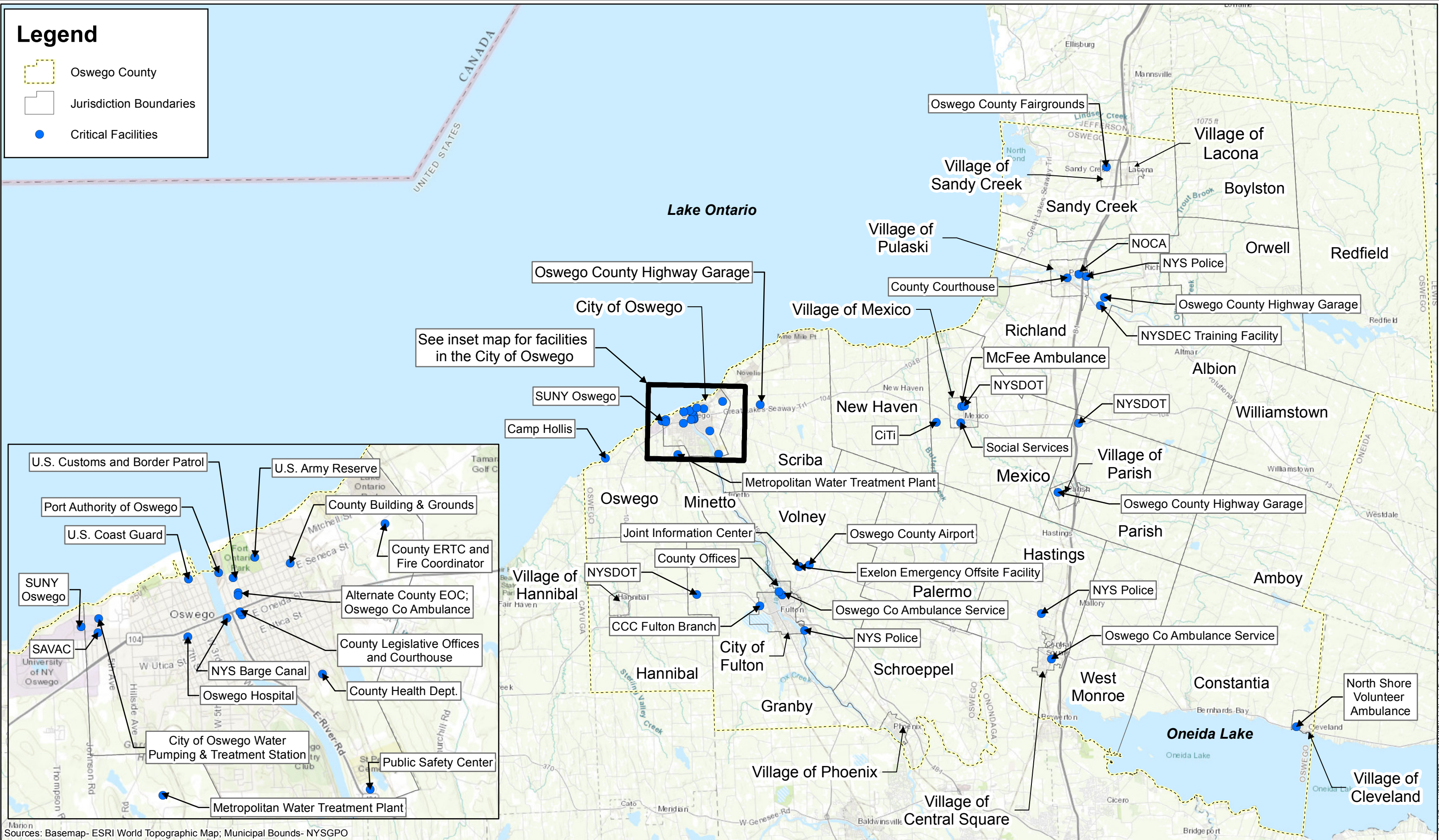
Sources: Earthstar Geographics, TerraColor, 1999; NYS GIS Clearinghouse



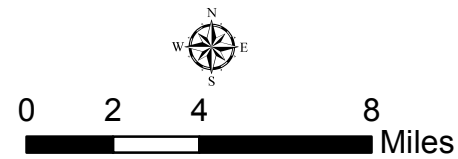
0 1 2 4 6
Miles

Legend

- Oswego County
- Jurisdiction Boundaries
- Critical Facilities



Sources: Basemap- ESRI World Topographic Map; Municipal Bounds- NYSGPO



Oswego County

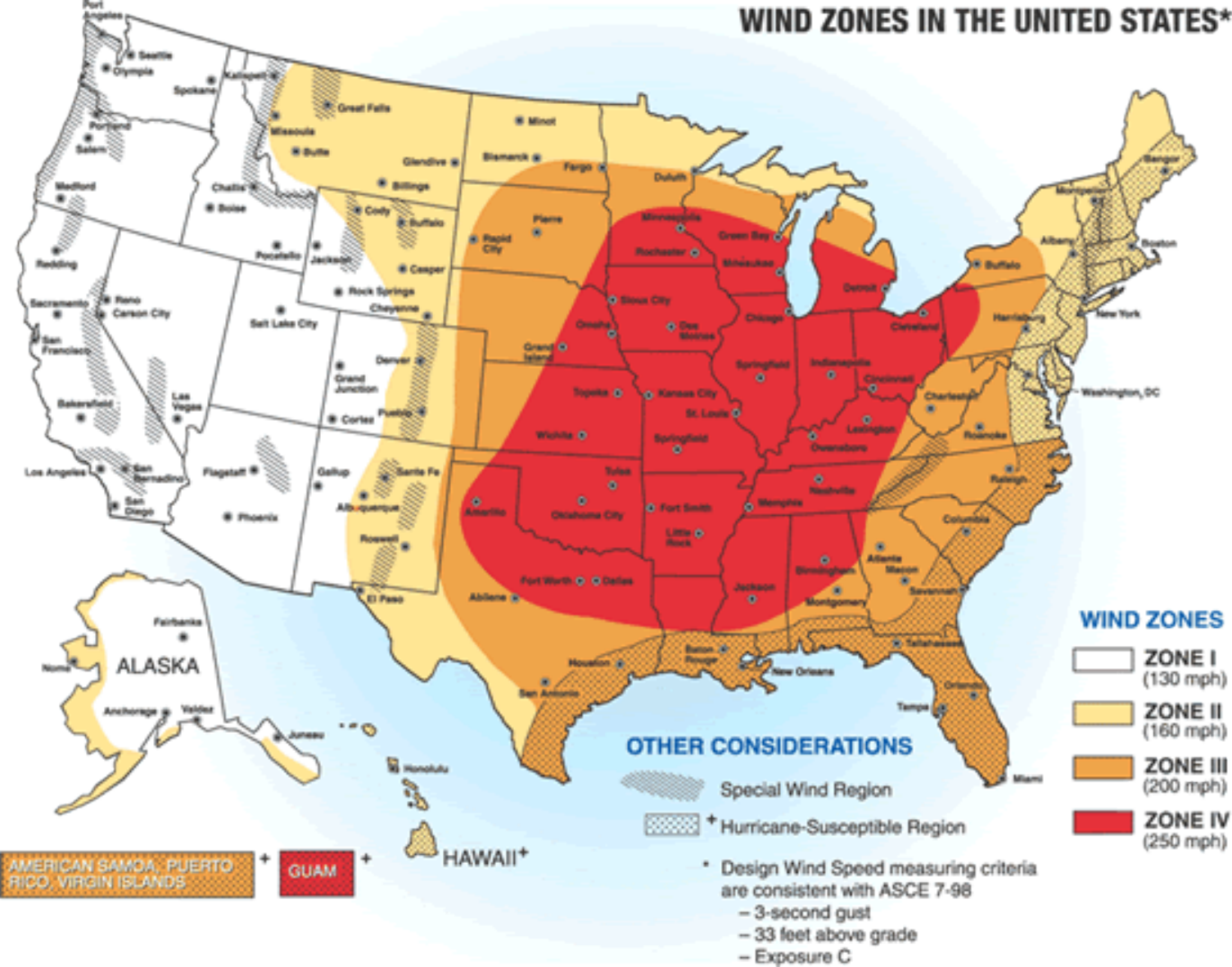
County Critical Facilities

Oswego County October 2018 New York






Figure 2.9

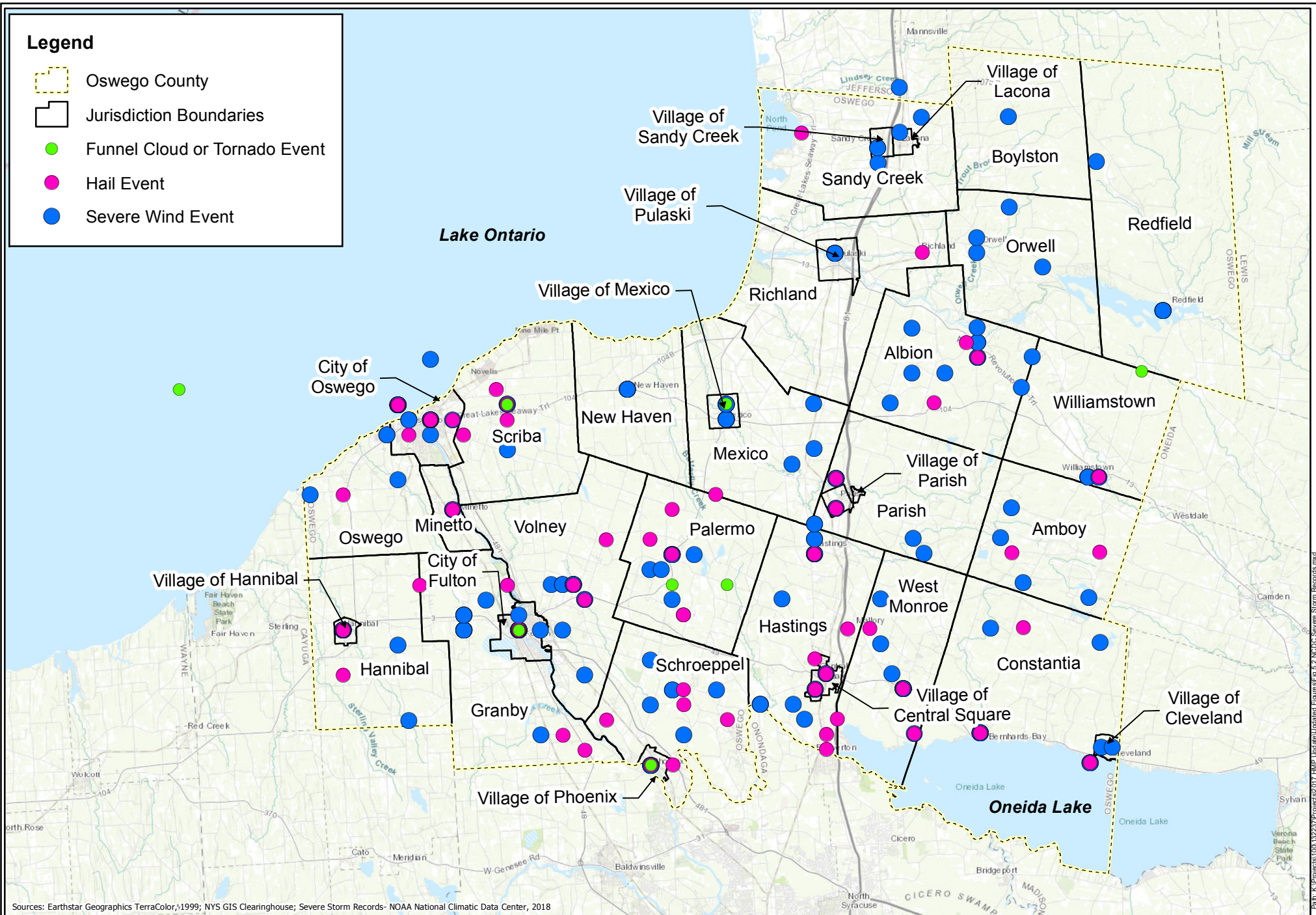
Project No. 132.237

Figure 5.1




Legend

-  Oswego County
-  Jurisdiction Boundaries
-  Funnel Cloud or Tornado Event
-  Hail Event
-  Severe Wind Event




Sources: Earthstar Geographics TerraColor, 1999; NYS GIS Clearinghouse; Severe Storm Records- NOAA National Climatic Data Center, 2018

Legend

 Oswego County

Jurisdiction Boundaries

 Jurisdiction Boundaries

 City

 Town

Historic Tornado Tracks

F-Scale Magnitude

 0

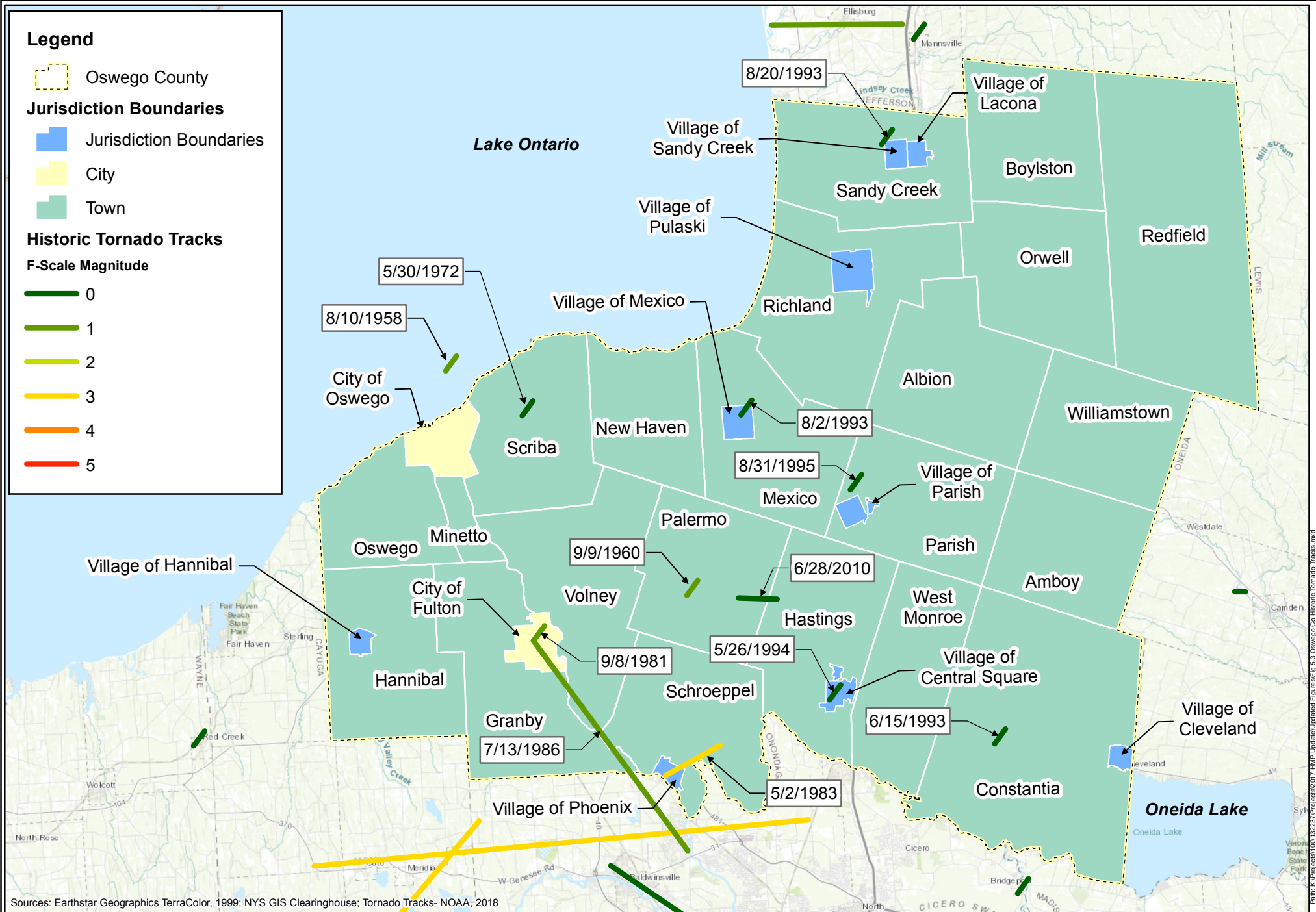
 1

 2

 3




 4

 5






Sources: Earthstar Geographics TerraColor, 1999; NYS GIS Clearinghouse; Tornado Tracks- NOAA; 2018

Legend

-  Oswego County
-  Jurisdiction Boundaries
-  NYS Coastal Boundary

FEMA Floodplains

-  100-Year Floodplain
-  100-Year Floodplain- Floodway
-  500-Year Floodplain



Sources: Earthstar Geographics TerraColor; 1999; NYS GIS Clearinghouse; Floodplains- FEMA, 2013; Coastal Boundaries- NYSDOS, 2013

Figure 5.5 National Weather Service Heat Index

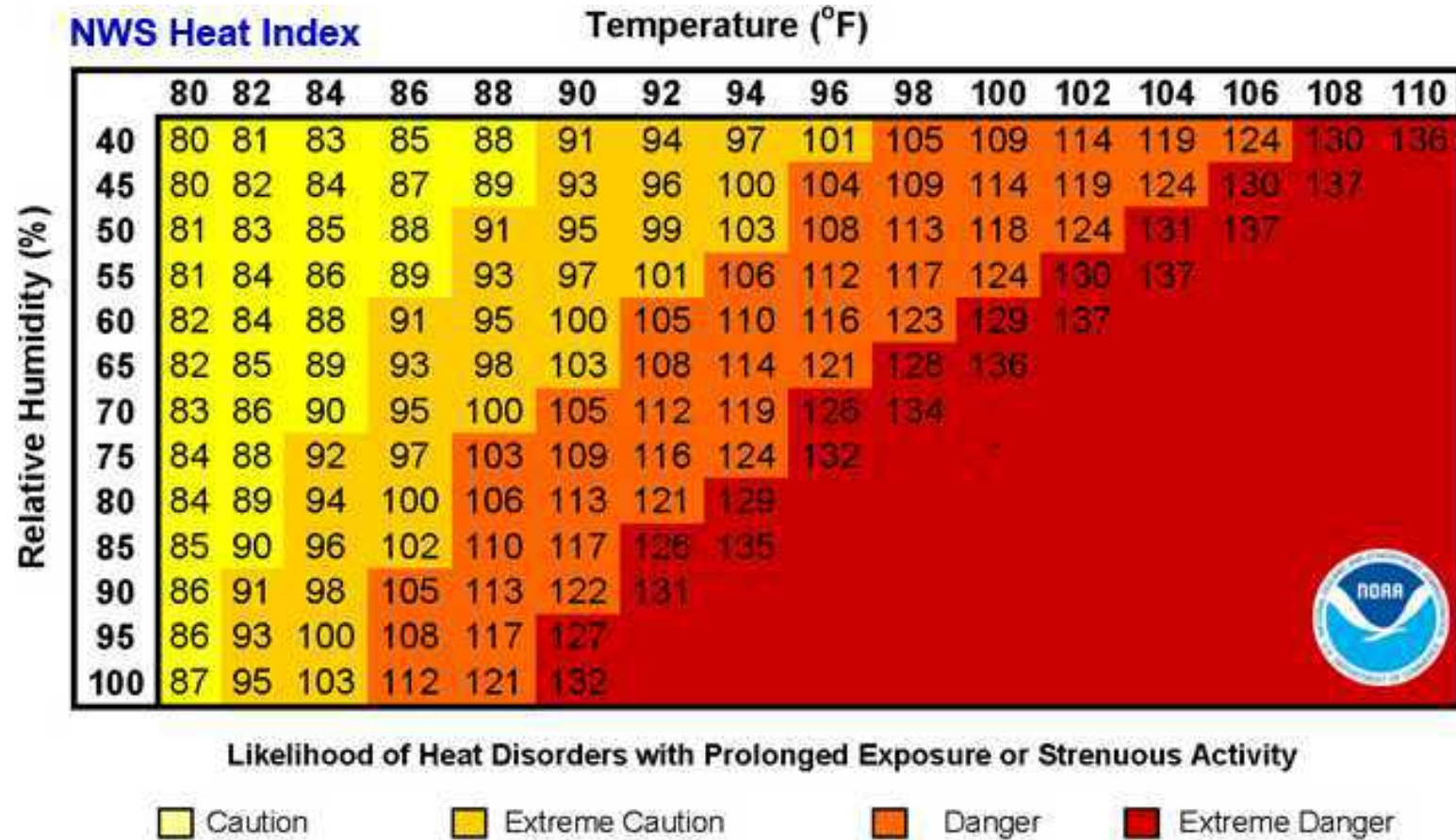


Figure 5.6 National Weather Service Wind Chill Index

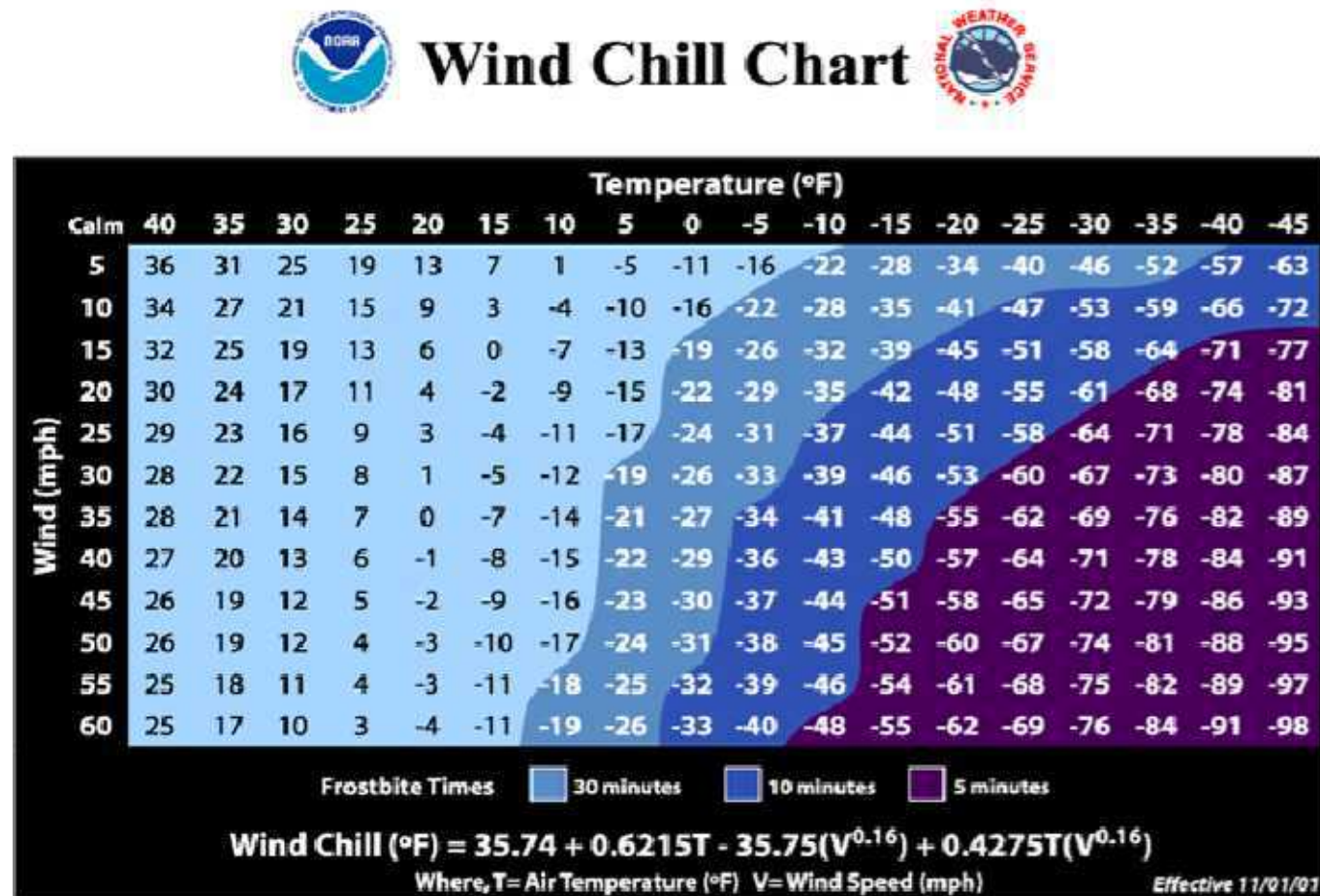





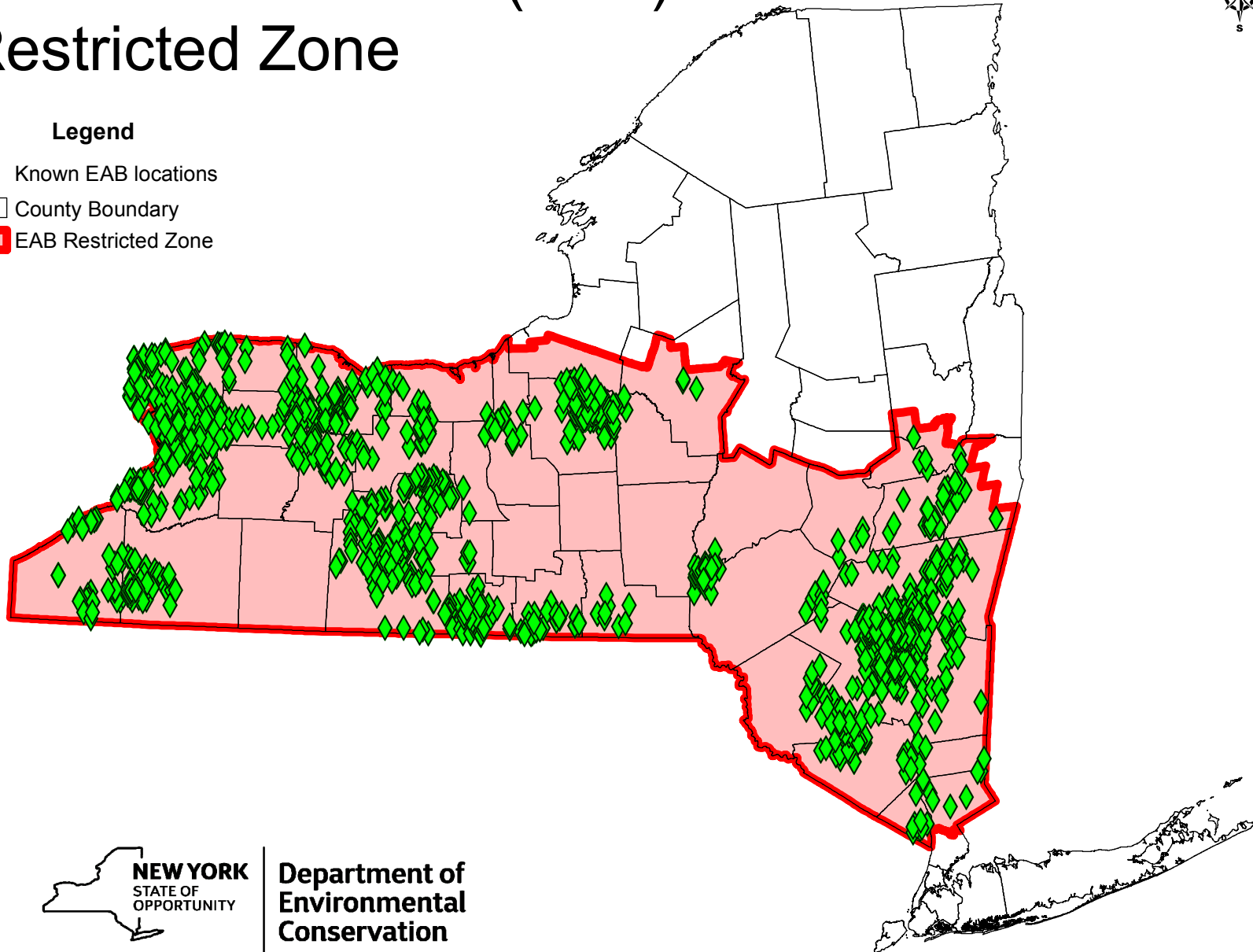
Figure 5.7a

Emerald Ash Borer (EAB) Restricted Zone



Legend

-  Known EAB locations
-  County Boundary
-  EAB Restricted Zone



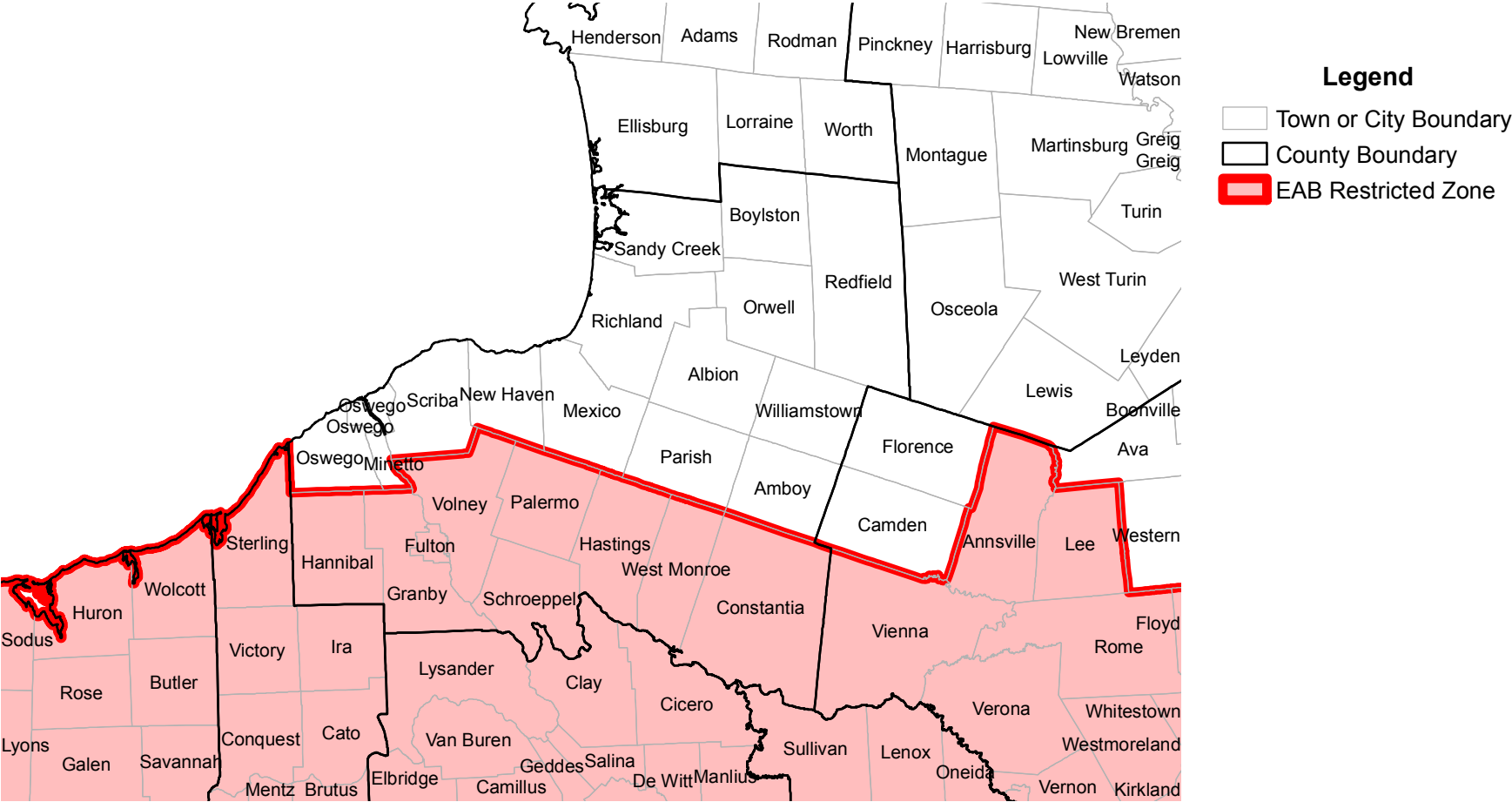
Department of
Environmental
Conservation

Created May 2017

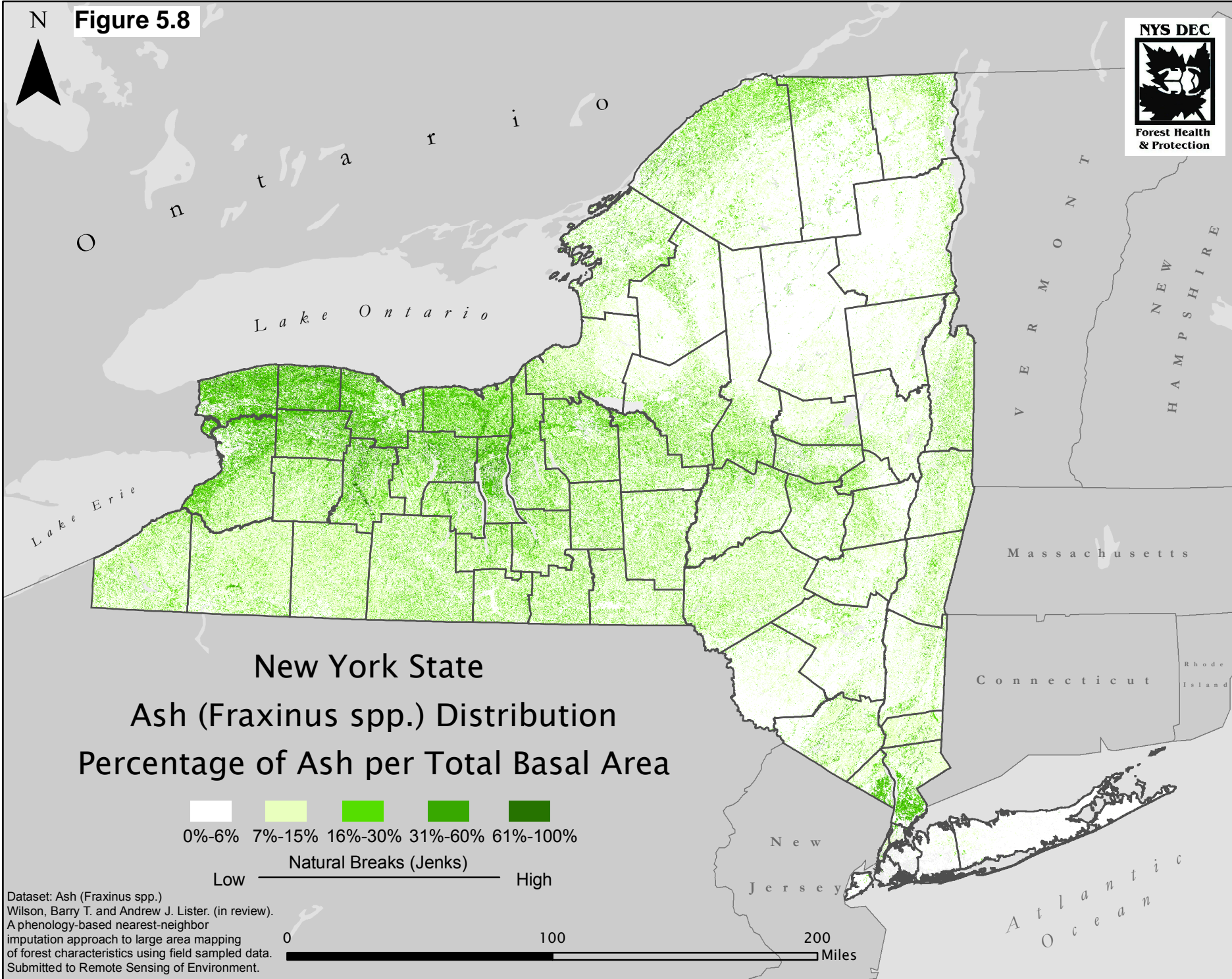
Bureau of Invasive Species & Ecosystem Health

Figure 5.7b

Emerald Ash Borer (EAB) Restricted Zone Detail - Oswego County



N **Figure 5.8**



New York State
Ash (*Fraxinus* spp.) Distribution
Percentage of Ash per Total Basal Area

0%-6% 7%-15% 16%-30% 31%-60% 61%-100%

Low Natural Breaks (Jenks) High

Dataset: Ash (*Fraxinus* spp.)
Wilson, Barry T. and Andrew J. Lister. (in review).
A phenology-based nearest-neighbor
imputation approach to large area mapping
of forest characteristics using field sampled data.
Submitted to Remote Sensing of Environment.

0 100 200 Miles

Figure 5.9

