

9.10 TOWN OF OWEGO

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

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
Name Debra Standinger, Planning and Zoning Administrator Address Phone Number 607-687-0123 x6 Email address dstandinger@townofowego.com	Name Dean Morgan, Deputy Supervisor Address Phone Number 607-687-0123 x333 Email address dmorgan@townofowego.com

B.) PROFILE

Population

19,883 (estimated 2010 U.S. Census)

Location

The Town of Owego is located in Tioga County, New York. The town is in the southeast corner of the county and the Village of Owego in the western part of the town. Both town and village are west of Binghamton, New York. According to the U.S. Census Bureau, the town has a total area of 105.8 square miles (273.9 km²), of which, 104.2 square miles (269.8 km²) of it is land and 1.6 square miles (4.1 km²) of it (1.51%) is water. The Susquehanna River flows across the town, dividing it into two parts. Owego Creek flows into the Susquehanna at Owego village and marks the west town line. The east town line is the border of Broome County, New York and the south town line is the border of Pennsylvania (Bradford and Susquehanna counties).

New York State Route 17/future I-86 crosses the town on the river's south bank. New York State Route 17C follows the river along the north bank. New York State Route 38 and New York State Route 96 converge north of Owego village.

Brief History

The town was first settled around 1786. The "Original Town of Owego" was created at the time Tioga County was formed in 1791. This original town was reduced by formation of later towns in the county. The town's name is a derivative of the Iroquois word "Ahwaga," which means, "Where the valley widens." This name came from the vast floods that run into the valley when the winter snows melt, which caused several deaths a year.

The current Town of Owego was formed as the "Town of Tioga" in 1800 from the Town of Union (now in Broome County). Confusion over the location of the Village of Owego caused the legislature to have the Town of Owego and the Town of Tioga to switch names in 1813 so that Owego village was in the same-named town.

Governing Body Format

The town is governed by a town supervisor and council members.



Growth/Development Trends

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) years in the municipality. Refer to the map in section I of this annex which illustrates the hazard areas along with the location of potential new development.

New Development/Potential Development in Municipality						
Property Name	Type (Residential or Commercial)	Number of Structures	Address	Block and Lot	Known Hazard Zone	Description/ Status
Taylor Garbage Recycling Facility	Commercial	2 structures	5730 State Route 434, Apalachin, NY 13732	142.05-1- 2.31	No	Construction of an enclosed recycling facility and office building completed.
Guthrie Health Care Facility	Commercial	1 structure	1246 State Route 38, Owego, NY 13827	106.00-3- 23	No	Construction of medical office facility completed.
CNYOG Compressor Facility	Commercial	1 structure	Rosenberger Road, Owego, NY 13827	107.00-1- 8.12	No	Construction of a natural gas compressor facility completed.
Everest Hotel Group	Commercial	1 structure	State Route 434, Apalachin, NY 13732	153.07-1- 40.11	Yes	Construction of a hotel to begin Spring 2012.

C.) NATURAL HAZARD EVENT HISTORY SINCE 2000

Tioga County has a history of natural hazard events as detailed in Volume I, Section 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events affecting the County and its municipalities. Below is presented a summary of events dating from the year 2000 to indicate the range and impact of natural hazard events in this community. Specific damages have been indicated if available from reference or local sources. For details of events prior to 2000, refer to Volume I, Section 5 of this plan.

Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Severe Storms / Flash Flood	DR-1335	Yes	May 3 – August 12, 2000	\$1.25 M in property damages County-wide.
Wind	N/A	N/A	December 12, 2000	Over \$64 K in property damage County-wide.
Drought	N/A	N/A	November 2001 – January 2002	Three month duration with the lowest PDSI of -3.28 in December.
Tornado F1	N/A	N/A	May 31, 2002	There were seven injuries and \$600 K in property damage County-wide.
Snowstorm	EM-3173	Yes	December 25, 2002	Snowfall totals in Tioga County ranged from 8.3 to 10.3.
Snowstorm	EM-3173	Yes	January 2-4, 2003	\$475 K in property damage County-wide.
Snowstorm	EM-3184	No	February 16-17, 2003	Snowfall totals in Tioga County ranged from 9.5 to 15 inches. The County had over \$152 K in property damage.
Severe Storm	N/A	N/A	July 21, 2003	Approximately \$50 K in property damage County-wide.
Wind	N/A	N/A	September 19, 2003	Approximately \$50 K in property damage County-wide.
Wind	N/A	N/A	October 15, 2003	Over \$58 K in property damage County-wide.
Wind	N/A	N/A	November 13, 2003	Over \$52 K in property damage County-wide.
Flood	N/A	N/A	March 1, 2004	\$40 K in property damages County-wide.
Flash Flood	N/A	N/A	July 7, 2004	The Town of Spencer had \$150 K in property damages.
Remnants of Hurricane Ivan	DR-1565	Yes	September 16-18, 2004	Approximately \$1M in property damage County-wide.
Flash Flood	N/A	N/A	March 28, 2005	Approximately \$70K in property damage County-wide.
Severe Storms and Flooding	DR-1589	Yes	April 2-4, 2005	Approximately \$500K in property damage County-wide.
Drought	N/A	N/A	Summer 2005	Not available.
Severe Storm	N/A	N/A	June 6, 2005	Approximately \$50 K in property

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Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
				damage County-wide.
Flash Flood	N/A	N/A	June 10, 2005	Approximately \$20K in property damage County-wide.
Flood	N/A	N/A	October 25, 2005	The Town of Waverly had \$20 K in property damages from the flooding event.
Flood	N/A	N/A	November 30 – December 1, 2005	The Town of Waverly had \$25 K in property damages from the flooding event.
Flood	N/A	N/A	January 18, 2006	Heavy rainfall caused minor flooding in Tioga County. The Town of Barton had \$10 K in property damages from the flooding event.
Severe Storm and Flooding	DR-1650	Yes	June 26-30, 2006	Over \$105M in property damage County-wide. A total of 5,000 homes were affected, with 500 homes damaged and 10 destroyed. Hardest hit areas were Tioga, Campville, Owego, Nichols, Barton and Apalachin.
Flash Flood	DR-1670	Yes	November 16-17, 2006	Approximately \$35 K in property damages County-wide.
Severe Winter Storm	N/A	N/A	February 13-14, 2007	Snowfall totals in Tioga County ranged from 12 to 18 inches.
Riverine Flood	N/A	N/A	March 15-16, 2007	The Town of Barton had approximately \$5 K in property damage.
Riverine Flood	N/A	N/A	March 25-30, 2007	Not available.
Drought	N/A	N/A	October – November 2007	Not available.
Winter Weather	N/A	N/A	November 17, 2007	Not available.
Heavy Snow	N/A	N/A	December 13, 2007	Not available.
Tornado	N/A	N/A	May 16, 2009	Approximately \$10 K in property damage County-wide.
Flash Flooding	N/A	N/A	September 30 – October 1, 2010	Approximately \$75 K in property damage County-wide.
Heavy Snow	N/A	N/A	March 6-7, 2011	In Tioga County, snowfall totals ranged from 13 to 18 inches.
Severe Storm, Flooding, Straight-Line Winds	DR-1993	Yes	April 27-28, 2011	Approximately \$3 M in property damages County-wide.
Severe Storms	N/A	N/A	May 26, 2011	Approximately \$45 K in property damage County-wide.
Heat Wave	N/A	N/A	July 21-23, 2011	A record high of 100°F occurred.
Remnants of Tropical Storm Lee	DR-4031	Yes	September 7-12, 2011	Over \$477 M in property damage County-wide.

Note: N/A = Not applicable



D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Rank #	Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
1	Flood	1% Annual Chance: \$1,215,670,000 0.2% Annual Chance: \$1,252,995,000	Frequent	45	High
2	Severe Winter Storm	1% of GBS: \$11,387,700 5% of GBS: \$56,938,500	Frequent	39	High
3	Severe Storm	100-Year MRP: \$0 500-Year MRP: \$468,003 Annualized Loss: \$4,280	Frequent	30	Medium
4	Earthquake	500-Year MRP: \$283,213 2,500-Year MRP: \$3,274,159 Annualized Loss: \$3,199	Occasional	20	Low
5	Drought	Not available	Frequent	18	Low

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

^{b.} High = Total hazard priority risk ranking score of 38 and above

Medium = Total hazard priority risk ranking of 21-37

Low = Total hazard risk ranking 20 or below

^{c.} The valuation of general building stock and loss estimates was based on the default general building stock database provided in HAZUS-MH 2.0 (RSMMeans 2006).

^{d.} Loss estimates are structural values only; does not include the value of contents.

^{e.} Loss estimates represent both structure and contents.

^{f.} The HAZUS-MH earthquake model results are reported by Census Tract.

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.

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

E.1) Legal and Regulatory Capability

Regulatory Tools (Codes, Ordinances., Plans)	Do you have this?	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of adoption)
1) Building Code	Y	Local	LL#1 of 2007 for Code Citation
2) Zoning Ordinance, Site Plan Review	Y	Local	1956
3) Subdivision Ordinance	Y	Local	1970
4) NFIP Flood Damage Prevention Ordinance	Y	Local	April 17, 2012
4a) Cumulative Substantial Damages	N	Local	
4b) Freeboard	N	Local	
5) Growth Management	N	Local	
6) Floodplain Management / Basin Plan	Y	Local or Watershed	April 17, 2012
7) Stormwater Management Plan/Ordinance	Y	Local	2010
8) Comprehensive Plan / Master Plan/ General Plan	Y	Local	2006
9) Capital Improvements Plan	N	Local or County	
10) Site Plan Review Requirements	N	Local	
11) Open Space Plan	N	Local or County	
12) Stream Corridor Management Plan	N	Local or Watershed	
13) Watershed Management or Protection Plan	N	Local or Watershed	
14) Economic Development Plan	N	County	
15) Comprehensive Emergency Management Plan	N	Local or County	
16) Emergency Response Plan	N	Local or County	
17) Post Disaster Recovery Plan	N	Local	
18) Post Disaster Recovery Ordinance	N	Local	
19) Real Estate Disclosure Requirement	N	State	
20) Other Special Purpose Ordinances –Town of Owego Access Management Plan	Y	Local or County	11/1998

E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/ Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Debra Standinger
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Ron Schmidt, Code Enforcement Officer
3) Planners or engineers with an understanding of natural hazards	Y	Consultants hired as needed
4) NFIP Floodplain Administrator	Y	Debra Standinger, Planning and Zoning Administrator
5) Surveyor(s)	Y	Consultants hired as needed
6) Personnel skilled or trained in "GIS" applications	Y	Consultants hired as needed
7) Scientist familiar with natural hazards	Y	Consultants hired as needed
8) Emergency Manager	Y	Tioga County Emergency Management Director Richard LeCount
9) Grant Writer(s)	Y	Debra Standinger
10) Staff with expertise or training in benefit/cost analysis	Y	Debra Standinger

E.3) Fiscal Capability

Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
1) Community Development Block Grants (CDBG)	No
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	Yes
6) Incur debt through general obligation bonds	Yes
7) Incur debt through special tax bonds	Yes
8) Incur debt through private activity bonds	Don't know
9) Withhold public expenditures in hazard-prone areas	Don't know
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	Yes
11) Other	

E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	NP	NP
Building Code Effectiveness Grading Schedule (BCEGS)	2	2007
Public Protection	N/A	N/A
Storm Ready	N/A	N/A
Firewise	N/A	N/A

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

The classifications listed above relate to the community’s effectiveness in providing services that may impact it’s vulnerability to the natural hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class one (1) being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

F.) MITIGATION STRATEGY

F.1) Past Mitigation Actions/Status

2006 Mitigation Project	Status	Action
Initiative 1: Apalachin Creek stream bank erosion, movement and deposition of large gravel deposits and woody debris. Tioga County received \$10,000 through Tioga County Flood Mitigation grant to complete stream bank restoration work to protect a sewer main.	This project was completed in 2009 and portions damaged by September 2011 flooding have been repaired. The Town is considering options to protect the sewer siphon	None
Initiative 2: Town utilities <ul style="list-style-type: none"> • Wayside Lane & McFall Pumping Station – control cabinet has been elevated to one foot above the flood of record (PW submitted for reimbursement). • Depot Street & NYS Route 434 well house – building demolished and new building constructed in March 2009 with first floor elevation one foot above the flood of record (2006) and electrical control 2 feet above 	Partially Complete (see description)	Incomplete projects included in 2012 mitigation strategy below.

2006 Mitigation Project	Status	Action
<p>floor.</p> <ul style="list-style-type: none"> • Pennsylvania Avenue & NYS Route 434 Pumping Station – control cabinet has been elevated to one foot above the flood of record (PW submitted for reimbursement). Establishment of remote standby power is a priority. • WPCP (Sewer Plant #2) – After June 2006 flooding, door dams were purchased but were overtopped during September 2011 flooding. Solutions are currently being evaluated by engineering firm. • Glann Road Overhead Sewer Main – Currently being evaluated by engineering firm. • Apalachin Creek - Six inch water main replacement project submitted for FEMA reimbursement. • Cold Spring Lane Water Main Interconnection – Solution being evaluated by FEMA. • Route 17C/Fifth Avenue (Sewer District 5) Pump Station – Elevated pad to be constructed. • Davis Hill & Marshland Road Pumping Station – Needs further evaluation to possibly elevate. 		
<p>Initiative 3: Flood Mitigation – Marshland Road, Wicks Road</p> <ul style="list-style-type: none"> • Environmental concerns with manufacturing company experiencing flooding; site may be located over a Superfund site – After 2006 flooding company demolished storage buildings located at the lowest spot on the site. September 2011 flooding caused company to close. • One severe repetitive loss property was acquired and demolished as a result of the June 2006 flooding. • Nine substantially damaged properties on Marshland Road and Wicks Road have been included in HMGP acquisition grant. 	Complete	None
<p>Initiative 4: Flood Mitigation – Buy Out Program Historically Flooded Areas - Kinney Road, Miller Beach Road, Hiawatha Road</p> <ul style="list-style-type: none"> • As a result of the June 2006 flooding, the Town of Owego acquired and demolished three properties on West Miller Beach Road and two on Kuenzli Street. • Thirty-three substantially damaged properties, including four on East Miller Beach Road and one on Kinney Road have been included in HMGP acquisition grant. • Fourteen properties, including six properties on Hiawatha Road have been included in HMGP elevation grant. 	Complete	None
<p>Town Utilities & Flood Mitigation –</p> <ul style="list-style-type: none"> • Wayside Lane & McFall Road – pumping station needs elevated • Depot Street & 434 – well house needs elevated • Penn. Ave and 434 – pumping station needs elevated <p>Incomplete Recommendation: Projects should be investigated under FEMA Hazard Mitigation Grants.</p>	<p>Recommendation: Projects should be investigated under FEMA Hazard Mitigation Grants.</p> <p>Complete</p>	None
<p>Education of public officials to address resident concerns and residents.</p>	In progress	Flood Mitigation outreach committee working on series of meetings for municipal officials, public and highway dept training of stream maintenance.

F.2) Hazard Vulnerabilities Identified

It is estimated that in the Town of Owego, 980 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the municipality's total land area, 5.9% is located within the 1% annual chance flood area. \$1,215,670,000 (65.6%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 252 NFIP policies in the community and there are 148 policies located within the 1% annual chance flood area. FEMA has identified 66 Repetitive Loss (RL) including 11 Severe Repetitive Loss (SRL) properties in the municipality.

NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)	# Policies in 500-Boundary (3)	# Policies Outside the 500-year Flood Hazard (3)
Owego (T)	252	432	\$20,362,141	66	11	148	171	81

Source:

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, in April 2012 using the "Comm_Name". These statistics are current as of January 31, 2012. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.
- (2) Total building and content losses from the claims file provided by FEMA Region 2 (current as of January 31, 2012).
- (3) The policy locations used are based on the latitude and longitude provided by FEMA Region 2.

HAZUS-MH estimates that for a 1% annual chance flood, \$23,808,000 (1.3%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 779 people may be displaced, 323 people may seek short-term sheltering, and an estimated 1858 tons of debris could be generated. HAZUS-MH estimates the following damage and loss of use to critical facilities in the community as a result of a 1% annual chance flood event:

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Structure Damage	Content Damages
Town of Owego Highway Garage	UDF	X	X	4.24	15.78
Apalachin Family Care	Medical Care		X		

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

F.3) PROPOSED HAZARD MITIGATION INITIATIVES

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

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Type
1	<p>Town Utilities & Flood Mitigation –</p> <ul style="list-style-type: none"> Wayside Lane & McFall Road – pumping station needs to be elevated Depot Street & 434 – well house needs to be elevated Penn. Ave and 434 – pumping station needs to be elevated 	Existing	Flood	1-1,1-9, 6-3	Town Administration	Medium	Medium	HMGP Grant	Short	High	PP
2	<p>Continue outreach by Flood Mitigation outreach committee which is working on series of meetings for municipal officials, public and highway dept training of stream maintenance.</p> <p>Areas of Concern: Marshland Road</p> <ul style="list-style-type: none"> Area repeatedly floods and issues with water not receding quickly after events. Environmental Concerns with manufacturing company experiencing flooding; site may be located over a 	Existing	Flood	1-5, 1-7, 2-1, 2-2, 3-3, 3-4	Town Administration, Flood Mitigation Committee with support from NYSOEM, TCSWCD	Medium	Low	Local budget	Short	High	PE



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	<p>superfund site.</p> <ul style="list-style-type: none"> Landowners building berm on property impact to adjacent landowners. Consider area for FEMA buyout program. <p>DEC should be contacted to look into superfund possibility. Landowners must comply with floodplain regulations, if adding fill to flood plain could be in violation.</p>										
3	<p>Flood Mitigation – Buy Out Program/Historically flooded areas</p> <ul style="list-style-type: none"> Kinney Road Miller Beach Hiawatha Road <p>Recommendation - Town should educate property owners on benefits of buyout program and encourage areas to enroll during open periods. 5 houses in enrolled in FEMA buyout program (Kuenzli Road & Miller Beach Rd)</p>	Existing	Flood	1-2, 1-9, 3-2	Town (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	High	High	HMGP Grant with local match	Short	High	PP
4	<p>Education of public officials to address resident concerns and residents. - Flood Mitigation outreach committee working on series of meetings for municipal officials, public</p>	N/A	Flood	1-5, 1-7, 2-1, 2-2, 3-3, 3-4	Town Administration, Flood Mitigation Committee with support from NYSOEM,	Low	Low	Local budget	Short	High	PE



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	and highway dept training of stream maintenance.				TCSWCD						
5	<u>Box culvert on Foster Valley Road</u> - Increase the structural stability and drainage capacity of the culvert on Foster Valley Road to alleviate stormwater flooding. The increased capacity will prevent excess water from undermining the road. Foster Valley Road is a major connection between the north and east portions of the Town of Owego.	Existing	Flood	1-1, 1-2	Town of Owego Highway Dept with support from NYSOEM	High	High	HMA	Short	High	SP
6	Three undersized culverts along Gaylord Road.- Increase the structural stability and drainage capacity of the three culverts under Gaylord Road that are insufficient in size during flash flood events. The increased capacity will prevent excess water from undermining the road and making portions of the road inaccessible. There are twenty residential properties along this road.	Existing	Flood	1-1, 1-2	Town of Owego Highway Dept with support from NYSOEM, TCWSCD	Medium	Medium	HMA	Short	High	SP
7	Hickories Park, located along the Susquehanna River, in the Town of Owego-Increase the drainage capacity of the entrance road to the Hickories Park which	Existing	Flood	1-1, 1-2	Town of Owego Consulting Engineer with support from TCSWCD, NYSDOT,	High	High	HMA	Short	High	SP



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	crosses Little Nanticoke Creek. During flooding, the road has been repeatedly washed away causing loss of income from camping and pavilion rental				NYSOEM						
8	Hickories Park, located in the Town of Owego along the Susquehanna River. Upgrade the electrical service to the Hickories Park, rather than merely replacing in kind, to service larger recreational vehicles	Existing	?	?	Town of Owego Consulting Engineer, Town of Owego Parks, NYSOEM	Medium	Medium	?	Short	Medium	SP
9	Municipal sewer line servicing Hickories Park at park entrance.- Directional boring of municipal sewer line servicing Hickories Park to prevent interruption of service when flooding occurs due to damage to entrance road where sewer line is located.	Existing	Flood	1-1, 1-2	Town Consulting Engineers, Town of Owego Utilities, TCWSCD	High	Medium	?	Short	High	SP
10	Culvert under Highland Drive-Increase the drainage capacity of the culvert on Highland Drive, near the intersection with Frederick Drive, to alleviate stormwater flooding from the Glann Road Creek. This increased capacity will prevent excess water from undermining the road and flooding residential properties along Highland	Existing	Flood	1-1, 1-2	Town of Owego Highway Dept. with support from TCSWCD, NYSOEM	Medium	High	FEMA PDM with local Capital Improvements Budget for 25% cost share	Short	High	SP



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11	Drive. Owego Town Hall, 2354 State Route 434, Apalachin, NY - Installation of permanent, automatic standby power for critical emergency service operation at the Owego Town Hall/New York State Police Barracks	Existing	All	1-1, 3-1, 6-2, 6-3	Town Consulting Engineers with support from Town of Owego Building Department, NYSOEM	High	High	FEMA PDM with local Capital Improvements Budget for 25% cost share	Short	High	ES
12	Relocation of Town Highway Barn, Parks Department and Director of Utilities' Offices-The Town is proposing to construct a facility that will house the Town of Owego Highway Department, Park Department Office and Director of Utilities & Administrative Staff. Each of these facilities are currently located within the floodplain and regularly receive damage when flooding occurs. The project site is on property owned by the Town and is located outside of the floodplain.	Existing	Flood	1-2, 1-9, 3-2	Town Consulting Engineers with support from Town of Owego Highway Department, Parks Department, Utilities Department, Planning Department, NYSOEM	High	High	FEMA PDM with local Capital Improvements Budget for 25% cost share		High	SP
13	Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Phase 1: Identify	Existing	Flood, Severe Storm, Earthquake	1-1, 1-2, 1-9	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF	Medium-High*	PP



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	<p>appropriate candidates for retrofitting based on cost-effectiveness versus relocation. (See initiative #13 above addressing Town Highway Barn.)</p> <p>Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.</p>										
14	<p>Purchase, or relocate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. (See initiative #3 for property acquisition initiative addressing residences on Kinney Road, Miller Beach, and Hiawatha Road.)</p> <p>Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.</p> <p>Phase 2: Where relocation is determined to be a viable option, work with property owners toward</p>	Existing	Flood, Severe Storm	1-2, 1-9, 3-2	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long-term DOF	Medium-High*	PP



SECTION 9.10: TOWN OF OWEGO

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	implementation of that action based on available funding from FEMA and local match availability.										
15	<p>Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.</p> <p>Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives 17 – 28 (below).</p>	New & Existing	Flood, Severe Storms	1-1, 1-2, 1-3, 1-6, 1-7, 1-9	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, ISO FEMA	High	Low - Medium	Local Budget	Ongoing	High	PP
16	Begin the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements).	New & Existing	Flood, Severe Storms	1-1, 1-7	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	Low	Low	Municipal Budget	Short	High	PP



SECTION 9.10: TOWN OF OWEGO

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Type
17	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: <ul style="list-style-type: none"> • Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. • Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. • Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. • Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. 										
	See above.	NA	All Hazards	1-5, 1-7, 2-1, 2-2, 3-3, 3-4	Municipality with support from Planning Partners, NYSOEM, FEMA	Low - Medium	Low - Medium	Municipal Budget; HMA programs with local or county match	Short	High	PE
18	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	NA	Flood, Severe Storms	1-6, 1-8	NFIP Floodplain Administrator with support from NYSDEC, NYSOEM, FEMA	Low	Low	Municipal Budget	Short (year 1)	Medium	PP
19	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM, and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	N/A	Flood, Severe Storms	1-6, 1-8	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	Short (DOF)	High	PP
20	Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS	NA	Flood, Severe Storms	1-6, 1-8	NFIP Floodplain Administrator with support from NYSDEC, NYSOEM, FEMA	Low	Low	Municipal Budget	Short (year 1)	Medium	PP



SECTION 9.10: TOWN OF OWEGO

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Type
	of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.										
21	Archive elevation certificates	NA	Flood, Severe Storm	1-3, 1-5, 1-6, 1-8, 2-3	NFIP Floodplain Administrator	Low	Low	Local Budget	On-going	High	PP
22	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	All	Municipality (via mitigation planning point of contacts) with support from Planning Partners (through their Points of Contact), NYSOEM	High	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing	High	PP
23	Complete the ongoing updates of the Comprehensive Emergency Management Plans	New & Existing	All Hazards	1-1, 1-7, 3-1, 5-1, 6-2, 6-3, 6-4	Municipality with support from NYSOEM	Low	Low	Local Budget	Ongoing	High	ES
24	Create/enhance/ maintain mutual aid agreements with neighboring communities for continuity of operations.	New & Existing	All Hazards	5-3, 5-4	Municipality with support from Surrounding municipalities and County	Low	Low	Local Budget	Ongoing	High	PP
25	Identify and develop agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster	NA	All Hazards	5-1, 5-2, 5-3	Municipality with support from County, NYSOEM, FEMA	Medium	Medium	Local budget	Short	Medium	PP



SECTION 9.10: TOWN OF OWEGO

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Type
	capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping										
26	Work with regional agencies (i.e. County and SOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	NA	All Hazards	5-1, 5-2, 5-3	Municipality with support from County, NYSOEM	Medium	Medium	Local budget, FEMA HMA and HLS grant programs	Short – Long-term DOF	Medium	PP
27	<p>Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA’s Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including:</p> <ul style="list-style-type: none"> • Support the performance of enhanced risk and vulnerability assessments for hazards of concern. • Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. <p>Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 “Rapid Visual Screening of Buildings for Potential Seismic Hazards” methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level.</p>										
	See above.	Existing	All Hazards	1-3, 1-6, 1-7, 2-3, 2-5	HMP Coordinator	Medium-High	Medium-High	Mitigation grant programs (PDM or HMGP) with local match	Long term DOF	Medium	PP

Notes:

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

Costs:

Where actual project costs have been reasonably estimated:

Low = < \$10,000

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

High = > \$100,000

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



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

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

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

Benefits:

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

Low = < \$10,000

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

High = > \$100,000

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

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

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

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

Potential Funding Sources:

ACOE = US Army Corps of Engineers

CBDG = Community Development Block Grants

DEC = NY Department of Environmental Conservation

DHSES=Department of Homeland Security Emergency Services

EMPG = Emergency Management Planning Grant

EWP = Emergency Watershed Protection Grants (NRCS)

FMA = Flood Mitigation Assistance Grant Program (FEMA)

HLS = Homeland Security Programs

HMGP= Hazard Mitigation Grant Program (FEMA)

HMA = Hazard Mitigation Assistance (FEMA)

NOAA= National Oceanic and Atmospheric Association

PDM = Pre-Disaster Mitigation Grant Program (FEMA)

RFC = Repetitive Flood Claims Grant Program

SHSP = State Homeland Security Program Grant

SRL = Severe Repetitive Loss Grant Program (FEMA)

WQIP = Water Quality Improvement Project Program (NYSDEC)

Timeline:

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

DOF = Depending on funding.

Notes (for Mitigation Type):

1. PP=Prevention and Property Protection: 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 or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations and acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.

2. PE=Public Education and Awareness: Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
3. NR=Natural Resource Protection: Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
4. SP=Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
5. ES=Emergency Services: Actions that protect people and property, during and immediately following, a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

G.) PRIORITIZATION OF MITIGATION INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
1	3	M	M	Y	Y	Y	H
2	6	M	L	Y	N	Y	H
3	3	H	H	Y	Y	Y	H
4	6	L	L	Y	N	Y	H
5	2	H	H	Y	Y	Y	H
6	2	M	M	Y	Y	Y	H
7	2	H	H	Y	Y	Y	H
8		M	M	Y	N	Y	M
9	2	H	M	Y	N	Y	H
10	2	M	H	Y	Y	Y	H
11	4	H	H	Y	Y	Y	High
12	3	H	H	Y	Y	Y	High
13	3	H	H	Y	Y	Y	M-H
14	3	H	H	Y	Y	Y	H
15	6	H	L-M	Y	Y	Y	H
16	2	M	L	Y	Y	Y	H
17	6	L-M	L-M	Y	Y	Y	H
18	2	L	L	Y	N	Y	M
19	2	M	L	Y	N	Y	H
20	2	L	L	Y	N	Y	M
21	5	L	L	Y	N	Y	H
22	All	H	L-M	Y	Y	Y	H
23	7	L	L	Y	N	Y	H
24	2	L	L	Y	N	Y	M
25	3	M	M	Y	Y	Y	M
26	3	M	M	Y	Y	Y	M
27	5	M-H	M-H	Y	Y	Y	M

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

Explanation of Priorities

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

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

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

Prioritization of initiatives was based on above definitions: Yes

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

H.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

None at this time.

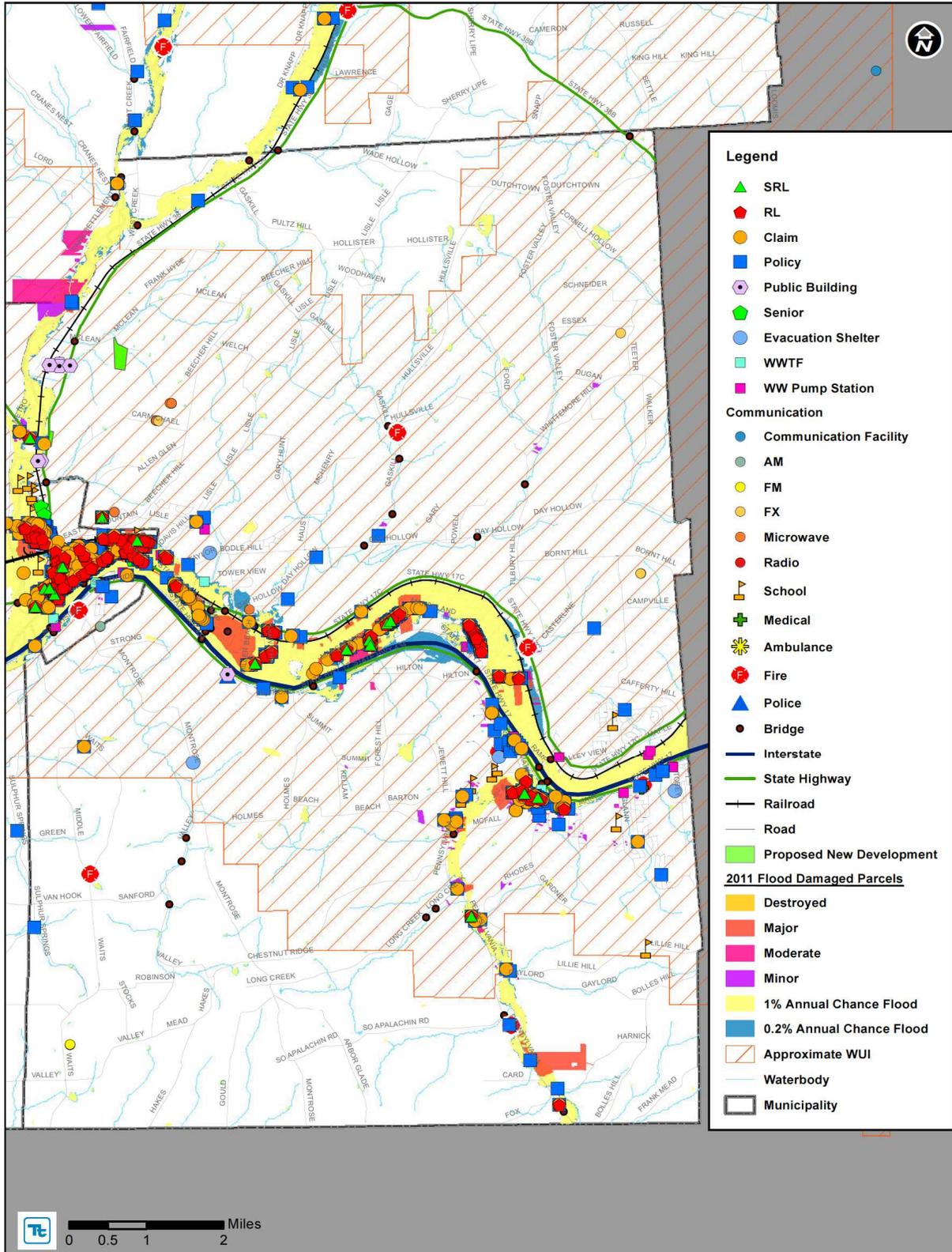
I.) HAZARD AREA EXTENT AND LOCATION

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

J.) ADDITIONAL COMMENTS

No additional comments at this time.

Figure 9.10-1. Town of Owego Hazard Area Extent and Location Map



Sources: FEMA, 2011

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