



9.14 Town of Norwich

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

9.14.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
David Law, Supervisor 157 County Route 32A, Norwich, NY 13815 Phone: 607-337-2302 E-mail: townofnorwich@adelphia.net	Theodore Guinn, Planning Board Chairman 120 Old Stone Road, Norwich, NY 13815 Phone: 607-334-8568 E-mail: tedguinn@frontiernet.net

9.14.2 Municipal Profile

This section provides a summary of the community.

Population

According to the U.S. Census, the 2010 population for the Town was 3,998.

Location

The Town of Norwich is located in the approximate center of Chenango County .It has a total area of 42.1 square miles. The Chenango River and Canasawacta Creek flow southward thru the town and converge just south of the City of Norwich. Other smaller streams include Thompson Creek, Johnson Creek, Gilmour Brook and Ransford Creek. New State Route 12 goes north and south thru the town; New York State Highway 23 goes east and west thru the town. County Route 32 parallels NYS Route 12 on the east side of the Chenango River. Other County Roads include County Route 33, 34 and 10 A, and 36.

Brief History

The Town of Norwich was named after Norwich, Connecticut. The first settlers arrived around 1788. The town was formed in 1793 from the Town of Union and Bainbridge. In 1806 the Towns of Pharsalia, Preston and Plymouth were formed out of town. In 1807 part of New Berlin and Columbus were formed. The City of Norwich was incorporated as a village in 1816.

Governing Body Format

The Town of Norwich is governed by a Town Supervisor and four Councilmen. This governing body will assume responsibility for adoption and implementation of this plan.

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 9.14.8 of this annex which illustrates the hazard areas along with the location of potential new development.



Table 9.14-1. Growth and Development

Property Name	Type (Residential or Commercial)	Number of Structures	Parcel ID(s)	Known Hazard Zone*	Description / Status
Auto Zone	Commercial	1	5617 St. Hwy. 12	None	Built
Lt. Warren E. Eaton/Chenango County Airport	Commercial/Infrastructure - \$1.4 Million parallel taxi-way	N/A	N/A	Near NFIP Floodplains	Proposed
The last major development in the Town was the Lowes commercial development in 2006.					

* Only location-specific hazard zones or vulnerabilities identified.

9.14.3 Natural Hazard Event History Specific to the Municipality

Chenango County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The table below presents a summary of natural events that have occurred to indicate the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources.

Table 9.14-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses																				
September 7-11, 2011	Tropical Storm Lee	DR-4031 EM-3341	Yes - IA, PA	Lower Ravine Road 12X10X80 culvert washout, 12X10X40 culvert washout, 120' erosion damage, 40' wall damage, 40' rip rap damage, 400' ditch damage. <table><tr><th>Road</th><th>Length</th></tr><tr><td>Dan Main Hill Road</td><td>2250'</td></tr><tr><td>Lyon Brook Road</td><td>50' culvert washout</td></tr><tr><td>Lawton-Scheer Road</td><td>50'</td></tr><tr><td>Oxford Road</td><td>200'</td></tr><tr><td>Miller Shumway Hill Road</td><td>culvert washout</td></tr><tr><td>Mary Windsor Road</td><td>1000'</td></tr><tr><td>Wightman Road</td><td>200'</td></tr><tr><td>Graf Road</td><td>100'</td></tr><tr><td>Beachwood Ave</td><td>400'</td></tr></table>	Road	Length	Dan Main Hill Road	2250'	Lyon Brook Road	50' culvert washout	Lawton-Scheer Road	50'	Oxford Road	200'	Miller Shumway Hill Road	culvert washout	Mary Windsor Road	1000'	Wightman Road	200'	Graf Road	100'	Beachwood Ave	400'
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Mary Windsor Road	1000'																							
Wightman Road	200'																							
Graf Road	100'																							
Beachwood Ave	400'																							
April 26 – May 8, 2011	Severe Storms, Flooding, Tornado and Straight Line Winds	DR-1993	Yes - PA	<table><tr><th>Road</th><th>Length</th></tr><tr><td>Ronsyl Drive</td><td>100'</td></tr><tr><td>Meadow View Heights</td><td>150'</td></tr><tr><td>Wells Road</td><td>700'</td></tr><tr><td>Dan Main Hill Road</td><td>700'</td></tr><tr><td>Pratt Road</td><td>50'</td></tr><tr><td>Warner Road</td><td>70'</td></tr><tr><td>Oxford Road</td><td>100'</td></tr><tr><td>Embankment washout</td><td></td></tr><tr><td>Lower Ravine Road</td><td>Clogged Pipe</td></tr></table>	Road	Length	Ronsyl Drive	100'	Meadow View Heights	150'	Wells Road	700'	Dan Main Hill Road	700'	Pratt Road	50'	Warner Road	70'	Oxford Road	100'	Embankment washout		Lower Ravine Road	Clogged Pipe
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Oxford Road	100'																							
Embankment washout																								
Lower Ravine Road	Clogged Pipe																							

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

IA Individual Assistance

N/A Not applicable

PA Public Assistance





9.14.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Town of Norwich. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for Town of Norwich.

Table 9.14-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^a	Probability of Occurrence ^c	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Drought	Damage estimate not available	Occasional	14	Medium
Extreme Temperature	Damage estimate not available	Frequent	30	Medium
Flood	1% Annual Chance: \$48,115,000	Frequent	27	Medium
Severe Storm	100-Year MRP: \$0 500-year MRP: \$62,440 Annualized: \$730	Frequent	48	High
Winter Storm	1% GBS: \$0 5% GBS: \$0	Frequent	48	High
Wildfire	Estimated Value in the WUI: \$322,490,000	Occasional	28	Medium
Infestation	Damage estimate not available	Frequent	39	Low
Natural Gas	Damage estimate not available	Frequent	21	Medium

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

b. The valuation of general building stock and loss estimates was based on the custom inventory developed for Chenango County and probabilistic modeling results and exposure analysis as discussed in Section 5.

c. Frequent = Hazard event is likely to occur within 25 years.

Occasional = Hazard event is likely to occur within 100 years

Rare = Hazard event is not likely to occur within 100 years

d. The estimated potential losses for Severe Storm are from the HAZUS-MH probabilistic hurricane wind model results. See footnote c.

GBS = General building stock

MRP = Mean return period

RCV = Replacement cost value

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the municipality.

Table 9.14-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in the 1% Flood Boundary (3)
Town of Norwich	24	17	\$1,698,161.27	1	1	10

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of April 30, 2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 4/30/2014.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.





Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case

Critical Facilities

The table below presents HAZUS-MH estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event.

Table 9.14-5. Potential Flood Losses to Critical Facilities

Name	Municipality	Type	Exposure	Potential Loss from 1% Flood Event		
			1% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽²⁾
Town of Norwich Water Pump Station	Norwich (T)	Potable Water	X	40		
Town of Norwich Water Pump Station	Norwich (T)	Potable Water	X	40		
Save-A-Lot	Norwich (T)	User Defined	X	36.36	88.59	
Town of Norwich Sewage Pump Station	Norwich (T)	Waste Water	X	40		

Source: HAZUS-MH 2.1

- (1) HAZUS-MH 2.1 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore this will be an indication of the maximum downtime (HAZUS-MH 2.1 User Manual).
- (2) In some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type.

Note:

NA = Not applicable;

NP = Not provided by HAZUS;

x = Facility located within the DFIRM boundary.

- = No results generated in HAZUS.

Please note it is assumed the wells have electrical equipment and openings are three-feet above grade

Other Vulnerabilities Identified by Municipality

The Town indicates that the Thompson Creek, Canasawacta Creek, and Gilmour Brook are areas that have considerable flood risk. Further, these areas are believed to have limited NFIP coverage.

9.14.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the municipality.



Table 9.14-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
Building Code	Y	Local, State	Chenango County Code Enforcement	
Zoning Ordinance	Y	Local		
Subdivision Ordinance	Y	Local		Adopted 2006
Flood Damage Prevention Ordinance (per NFIP)	Y	Federal, State, Local	Chenango County Code Enforcement (through MOU)	Adopted 1987; updated Oct. 11, 2010
NFIP- Freeboard	Y	Federal, State, Local	Chenango County Code Enforcement (through MOU)	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types.
NFIP- Cumulative Substantial Damages	N			
Special Purpose Ordinances	N			
Growth Management	Y	Local		
Floodplain Management / Basin Plan	Y	State	NYSDEC & Federal Agencies	
Stormwater Management Plan/Ordinance	Y	Local, State	NYSDEC	
Comprehensive Plan / Master Plan	Y	Local		
Capital Improvements Plan	Y	Local		
Site Plan Review Requirements	Y	Local		Adopted 1988
Habitat Conservation Plan	N			
Economic Development Plan	N			
Emergency Response Plan	Y	Local, State	Chenango County Emergency Office, Norwich Fire Department	
Post Disaster Recovery Plan	Y	Local	Chenango County Emergency Office, Norwich Fire Department	
Post Disaster Recovery Ordinance	N			
Real Estate Disclosure req.	Y	State		State Mandated
Other: Five Year Moratorium on High Voltage DC Transmission	Y	Local		Adopted 2007



Tool / Program (code, ordinance, plan)	Do you have this? (Y/N)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, date of adoption, name of plan, explanation of authority, etc.)
Systems.				
Unregistered Vehicle Ordinance	Y	Local		Adopted 1990
Junk Yard Ordinance	Y	Local		Adopted 1980

(1) Chenango County Planning Commission has review authority on certain actions. If they disapprove an action, local Zoning Board can approve with a greater majority and present findings.

(2) NYS Subdivision laws provide a general framework, but allow room for local ordinances and interpretation.

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Town of Norwich.

Table 9.14-7. Administrative and Technical Capabilities

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Chenango County Planning Department
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Chenango County Code Enforcement
Planners or engineers with an understanding of natural hazards	Y	Chenango County Planning Department
NFIP Floodplain Administrator	Y	Chenango County Code Enforcement (currently Steve Fox)
Surveyor(s)	Y	Chenango County Highway Department
Personnel skilled or trained in “GIS” applications	Y	Chenango County Planning Department
Scientist familiar with natural hazards in the County.	Y	Chenango County Soil & Water
Emergency Manager	Y	Chenango County Emergency Management Office
Grant Writer(s)	Y	Chenango County Planning Department; Cornell Cooperative Extension
Staff with expertise or training in benefit/cost analysis	Y	Contract if necessary

Fiscal Capability

The table below summarizes financial resources available to the Town of Norwich.

Table 9.14-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact Fees for homebuyers or developers of new development/homes	No
Incur debt through general obligation bonds	Yes



Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Federal and State grant programs (e.g. FEMA, NYS DHSES, NYSDEC)	Yes
Other	Yes

Community Classifications

The table below summarizes classifications for community program available to the Town of Norwich.

Table 9.14-9. Community Classifications

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

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the 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 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/>

National Flood Insurance Program

In Chenango County, the County Code Enforcement Official, Steve Fox, CFM, serves as the floodplain administrator for various jurisdictions within the county, including the Town of Norwich. County-wide floodplain management capabilities can be found in the County annex, 9.1.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

It is the intention of this municipality to incorporate hazard mitigation planning and natural hazard risk reduction as an integral component of ongoing municipal operations. The following textual summary and



table identify relevant planning mechanisms and programs that have been/will be incorporated into municipal procedures, which may include former mitigation initiatives that have become continuous/on-going programs and may be considered mitigation “capabilities”:

Municipal Budgets: The Town shall continue to support their on-going program of tree pruning within the Town Highway Rights of Way to protect against severe storm and severe winter storm. While not eligible under the Federal mitigation grant funding programs, the Town is looking to purchase a chipper to aid in storm clean-up.

Stream Corridor Inspections: Develop and implement an annual stream corridor inspection program to identify areas that require de-snagging, bank stabilization, etc.

9.14.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2008 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.

Table 9.14-10. Past Mitigation Initiative Status

Description	Status	Review Comments
TN-1: Upgrade stormwater management infrastructure. This will involve up-grading culvert sizes when they require replacement.	Ongoing	A modified version of this initiative is being carried forward which will merge with TN-2 below, and identify specific areas for mitigation projects.
TN-2: Retrofit flood-prone roadways that are critical to infrastructure. This will include an upgrade and riprap of an existing culvert crossing on Dan Main Hill Road scheduled for the spring of 2008.	Ongoing, and completed	See above. The project to upgrade and riprap of an existing culvert crossing on Dan Main Hill Road has been completed.
TN-3: Continue on-going program of tree pruning within the Town Highway Rights of Way. Purchase chipper to aid in storm clean-up.	Ongoing/continuous	This initiative is being removed from the updated mitigation strategy, and identified as a mitigation capability as it refers to activities that are an ongoing and normal part of Town operations.
TN-4: Control construction of beaver dams by monitoring problem areas and cleaning blocked sluice and ditches. This will also include all rivers and streams within the town.	Ongoing/continuous	This initiative is being removed from the updated mitigation strategy, and identified as a mitigation capability as it refers to activities that are an ongoing and normal part of Town operations.
TN-5: Annual inspection of all waterways going thru the Town. Remove debris, clean and stabilize the banks as needed.	Ongoing/continuous	This initiative is being carried forward in the updated mitigation strategy as additional support is needed with implementation (staffing, permitting, site access, etc.).
TN-6: Consider non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss, such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost and	Ongoing/continuous	An amended version of this initiative is being carried forward in the updated strategy. Implementation is supported by specific initiatives in the updated strategy, including participation in related county-led initiatives.



Description	Status	Review Comments
willing participation of property owners		
TN-7: Consider participation in incentive-based programs such as CRS.	Ongoing	The Town has included an initiative to support county-led initiatives, which include programs to enhance floodplain management capabilities. The Village will attend a CRS workshop if offered locally.
TN-8: Support County-wide initiatives identified in Section 9.1, Volume II of this Plan.	Ongoing	A modified version of this initiative is being carried forward, identifying local participation in specific county-led mitigation programs and initiatives.

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

None identified.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Norwich identified mitigation initiatives they would like to pursue in the future. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives 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. Table 9.14-11 identifies the municipality's updated local mitigation strategy.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.14-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.14-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
TN-1 (former TN-1 and -2)	Upgrade stormwater management infrastructure, and/or retrofit flood-prone roadways that are deemed critical to the Town and Region. This will involve up-grading culvert sizes (typically when they require replacement), and/or elevating sections of roadway as appropriate. Specifically identified are sections of the following roadways that have been damaged during prior flood events: <ul style="list-style-type: none"> Dan Main Hill Road Lyon Brook Road Lawton-Scheer Road Oxford Road Miller Shumway Hill Road Mary Windsor Road Wightman Road Graf Road Beachwood Ave Ronsyl Drive Meadow View Heights Wells Road Pratt Road Warner Road Lower Ravine Road 										
	See above.	Existing	Flooding, Severe Storms	O-1, O-7, O-8, O-12	Town of Norwich Highway Department; Chenango County Highway Department, Chenango County Soil & Water	Reduced damage to and loss of service of critical roadways	High (dependent on project – to be determined as specific projects are being considered and/or implemented)	Local funding; FEMA mitigation grant funding as appropriate and available	Ongoing	Medium	SIP
TN-2 (former TN-5)	Annual inspection of all waterways going thru the Town. Remove debris, clean and stabilize the banks as needed.	Existing	Flood, Severe Storm	O-1, O-5, O-6, O-8, O-12	Town of Norwich Highway Department; with the support of NYSDEC and Chenango County SWCD	Reduced chance of localized flooding and stream bank erosion	Medium (annual inspection); Medium – High (debris management and bank stabilization)	Local funding; FEMA HMA or NRCS EWP grant funding as appropriate and available	Ongoing	Medium	SIP, NRP
TN-3 (former TN-6)	Promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost and willing participation of property owners. Specifically identified is the residential SRL property on Highway 320, and the Chenango Memorial Hospital RL property at the corner of Rt. 12 and 320.										
	See above.	Existing	Flood, Severe Storm	O-7, O-10, O-13	Norwich Town Board; support from NYS DHSES	High (reduced or eliminated risk to property)	High	FEMA or other mitigation	Long-term DOF	High	SIP, EAP



Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
					and FEMA	damage from flooding)		grant funding, NFIP flood insurance and ICC; property owner for local match.			
TN-4	Support and participate in Federal, State and County-led programs and initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically: <ul style="list-style-type: none"> Attend regional workshops, trainings and continuing education as made available by the County with FEMA, ISO and NYS DHSES support, and as appropriate for the community, anticipated to included: NFIP for Insurance Agents, Lending Institutions and Realtors; Floodplain Management and the Certified Floodplain Managers (CFM) certification. Public education and awareness program for floodplain residents. Updates to NFIP floodplain mapping. Promotion of "Firewise" programs in the County. Establishment of an interagency program involving Public Health/DSS/Area Agency on Aging to identify vulnerable populations (elderly, homebound, homeless), and the development/enhancement of plans, programs and facilities to meet the specific needs of these populations. 										
	See above	New and Existing	All Hazards	All Objectives	Chenango County, as supported by relevant local department leads,	High (comprehensive improvements mitigation and risk-reduction capabilities)	Low-Medium (locally)	Local (staff resources)	Short	High	LPR, EAP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

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

Acronyms and Abbreviations:

CAV Community Assistance Visit
 CRS Community Rating System
 DPW Department of Public Works
 FEMA Federal Emergency Management Agency
 FPA Floodplain Administrator
 HMA Hazard Mitigation Assistance
 N/A Not applicable
 NFIP National Flood Insurance Program
 OEM Office of Emergency Management

Potential FEMA HMA Funding Sources

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program
 RFC Repetitive Flood Claims Grant Program (discontinued 2015)
 SRL Severe Repetitive Loss Grant Program (discontinued 2015)

Timeline:

Short 1 to 5 years
 Long Term 5 years or greater
 OG On-going program
 DOF Depending on funding

Costs:

Where actual project costs have been reasonably estimated:
 Low < \$10,000

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:





Costs:

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:

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.

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities



Table 9.14-12. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
TN-1 (former TN-1 and -2)	Upgrade stormwater management infrastructure, and/or retrofit flood-prone roadways.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium (Tier II)
TN-2 (former TN-5)	Conduct routine inspections; de-snag, clean and stabilize banks of waterways.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium (Tier II)
TN-3 (former TN-6)	Promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	High (Tier I)
TN-4	Support and participate in Federal, State and County-led programs and initiatives	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Medium (Tier II)

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.14.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.14.8 Hazard Area Extent and Location

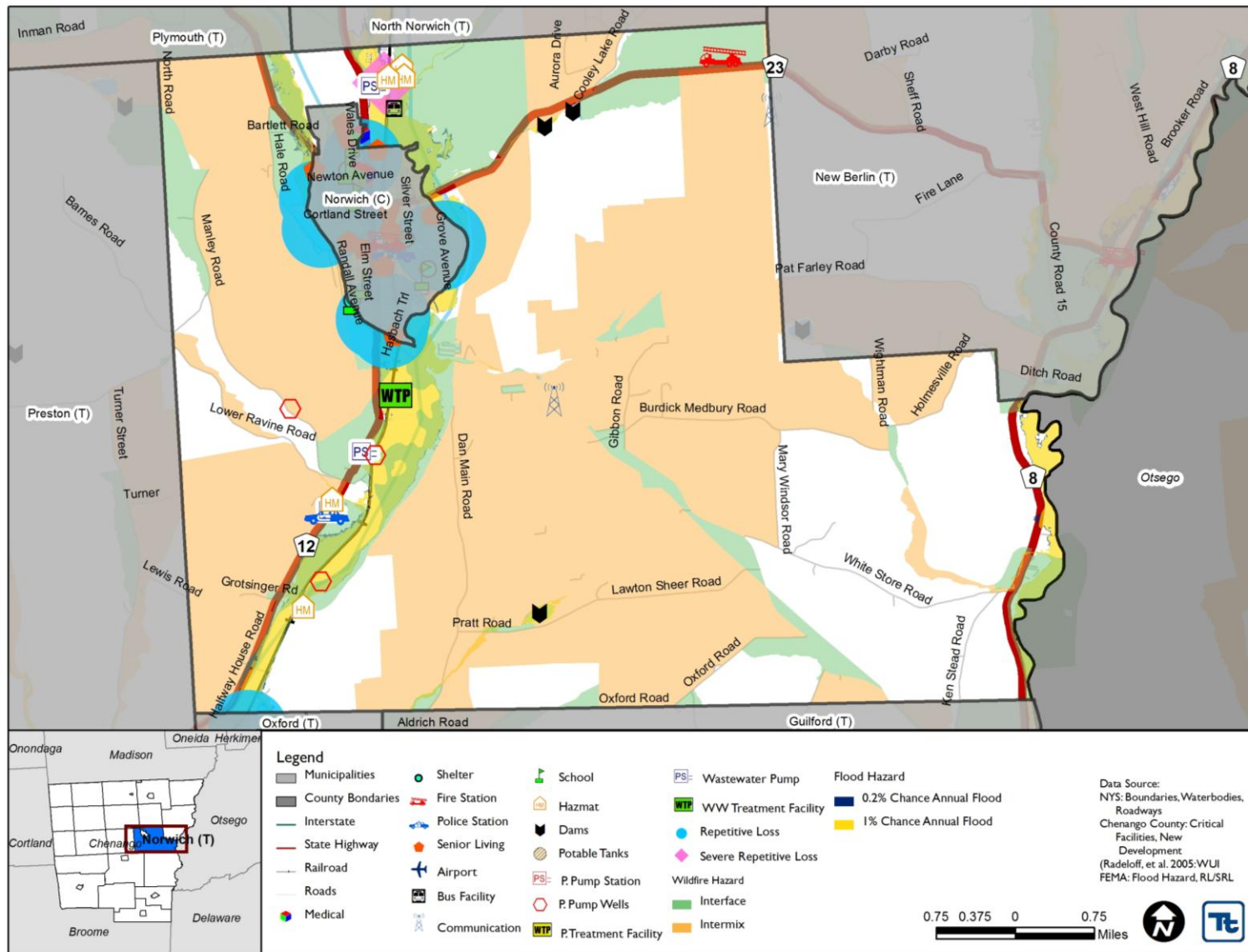
Hazard area extent and location maps have been generated for the Town of Norwich that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Norwich has significant exposure. Figure 9.14-1 illustrates the hazard area extent and location for the Town.

9.14.9 Additional Comments

None at this time.



Figure 9.14-1. Town of Norwich Hazard Area Extent and Location Map





Name of Jurisdiction: Town of Norwich
Number: TN - 1
Mitigation Action/Initiative: Mitigate Flood-Prone Roadways (Town-wide)

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Numerous town-owned roads throughout the Town are vulnerable to flood damage, primarily as a result of inadequate stormwater management infrastructure.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action will result in continued road damage and chronic road repair. Stormwater infrastructure upgrades are the only feasible and cost-effective approach to mitigating these vulnerabilities.
Action/Project Intended for Implementation	
Description of Selected Action/Project	<p>Upgrade stormwater management infrastructure, and/or retrofit flood-prone roadways that are deemed critical to the Town and Region. This will involve upgrading culvert sizes (typically when they require replacement), and/or elevating sections of roadway as appropriate. Specifically identified are sections of the following roadways that have been damaged during prior flood events:</p> <ul style="list-style-type: none">• Dan Main Hill Road• Lyon Brook Road• Lawton-Scheer Road• Oxford Road• Miller Shumway Hill Road• Mary Windsor Road• Wightman Road• Graf Road• Beachwood Ave• Ronsyl Drive• Meadow View Heights• Wells Road• Pratt Road'• Warner Road• Lower Ravine Road
Mitigation Action/Project Type	SIP
Objectives Met	O-1,O-7,O-8, O-12
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	Reduced damage to and loss of service of critical roadways
Estimated Cost	High (dependent on project – to be determined as specific projects are being considered and/or implemented)
Priority*	Medium
Plan for Implementation	



Responsible Organization	Town of Norwich Highway Department; with the support of: Chenango County Highway Department, Chenango County Soil & Water
Local Planning Mechanism	Highway Plan, Capital Improvement Plan
Potential Funding Sources	Local funding; FEMA mitigation grant funding as appropriate and available
Timeline for Completion	Ongoing; specific projects may require outside funding
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

* Refer to results of Prioritization (page 2)



Action Number:

TN - 1

Action Name:

Mitigate Flood-Prone Roadways (Town-wide)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	No significant life safety issues associated with these projects
Property Protection	1	Will protect public infrastructure
Cost-Effectiveness	-1 to 1	Cost-effectiveness not yet determined on a project-specific basis
Technical	1	Town and contractor technical capabilities sufficient to implement
Political	1	Supported politically
Legal	1	Town has legal authority to implement projects
Fiscal	1	Funding will need to be approved/appropriated on a project-specific basis
Environmental	0	
Social	1	Benefits all social segments
Administrative	1	Town has the administrative capabilities to implement
Multi-Hazard	1	
Timeline	0	Dependent on funding
Agency Champion	1	Town Highway and Town Planning and Public Works
Other Community Objectives	1	Long-term risk reduction/management and sustainability
Total	9-11	
Priority (High/Med/Low)	Medium – High (project specific)	



Name of Jurisdiction: Town of Norwich
Number: TN - 2
Mitigation Action/Initiative: Stream Channel Monitoring and Rehabilitation

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Stream channels continue to become compromised by downed trees and other vegetation, and accumulating silt and deposited materials. This has led to localized problems with stream bank erosion and overbank flooding.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action will result in the risk remaining unabated. Large-scale stream channel dredging is not generally permissible, cost-effective, or often legally possible due to access issues. The most available approach is to work with CC SWCD, NYS DEC and other stakeholders to develop and implement channel clean-up and rehabilitation projects for specific stream segments/reaches.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Annual inspection of all waterways going thru the Town. Remove debris, clean and stabilize the banks as needed.
Mitigation Action/Project Type	SIP, NRP
Objectives Met	O-1, O-5, O-6, O-8, O-12
Applies to existing structures/infrastructure, future, or not applicable	Existing
Benefits (losses avoided)	Reduced chance of localized flooding and stream bank erosion
Estimated Cost	Medium (annual inspection); Medium – High (debris management and bank stabilization)
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town of Norwich Highway Department; with the support of NYSDEC and Chenango County SWCD
Local Planning Mechanism	Local Budgets; regional stream management programs
Potential Funding Sources	Local funding; FEMA HMA or NRCS EWP grant funding as appropriate and available
Timeline for Completion	Short, depending on permitting and access
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

* Refer to results of Prioritization (page 2)



Action Number:

TN - 2

Action Name:

Stream Channel Monitoring and Rehabilitation

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	No life safety issues
Property Protection	1	May protect private property and infrastructure
Cost-Effectiveness	0	Cost-effectiveness not yet determined
Technical	1	Technical resources available
Political	1	Supported politically
Legal	-1	Permitting and site access are challenges
Fiscal	0	Funding not budget or secured
Environmental	-1	Environmental permitting is a challenge
Social	1	Benefits all populations
Administrative	1	Town has the administrative resources to implement
Multi-Hazard	1	
Timeline	0	Short, depending on permitting and access
Agency Champion	1	Town Highway / Public Works, CC SWCD
Other Community Objectives	1	Long-term risk reduction/management and sustainability
Total	6	
Priority (High/Med/Low)	Low	