



9.18 City of Norwich

This section presents the jurisdictional annex for the City of Norwich. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the City participated in the planning process; an assessment of the City of Norwich’s risk and vulnerability; the different capabilities utilized in the City; and an action plan that will be implemented to achieve a more resilient community.

9.18.1 Hazard Mitigation Planning Team

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

Table 9.18-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Jan Papelino, Fire Chief 31 East Main Street Norwich, NY 13815 607-334-1214 nfdchief@norwichnewyork.net	None Identified
NFIP Floodplain Administrator	
Amy Donnison, Code Enforcement Officer One City Plaza, Norwich, NY 13815 607-334-1233 adonnison@norwichnewyork.net	

9.18.2 Municipal Profile

According to the U.S. Census, the 2010 population for the City was 7,190.

The City of Norwich is located in picturesque upstate New York, nestled in the Chenango River Valley and has a total area of just over 2.0 square miles. The river winds south along the eastern edge of the city. Along the western border, the Canasawacta Creek flows south, until it unites with the Chenango River at the southern city limits.

Regionally, Norwich lays almost dead center of the "upside down triangle" that can be drawn connecting the cities of Syracuse, Albany, and Binghamton, along Interstates 90, 88, and 81, respectively. The City is located in the center of this triangle, on the intersection of State Highway 12 and State Highway 23.

Norwich is located less than an hour from the greater Binghamton area, Oneonta, Cortland and Utica. Syracuse is just over an hour away and Albany and Rochester are two hours from Norwich.

The first settlers arrived around 1788. The Town of Norwich was formed in 1793 from the Towns of Union (now in Broome County) and Bainbridge in southeastern Chenango County. Afterwards, Norwich, as a "mother town" of the county, lost substantial territory in the formation of new towns. In 1806, Norwich gave up territory to form the Towns of Pharsalia, Plymouth and Preston. More of Norwich was lost in 1807 to form part of New Berlin and part of the Town of Columbus. In 1808 and 1820, Norwich exchanged territory with the Town of Preston.



The community of Norwich set itself off from the town in 1816 by incorporating as a village, later becoming the City of Norwich in 1914.

The City is governed by a six-member Common Council and a part-time Mayor form of government. This governing body will assume responsibility for adoption and implementation of this plan. The Mayor’s position is part-time and has a two-year term. The Common Councilors are also part-time and serve four-year terms. Three Council seats are up for election every other November.

The City’s Charter provides for a strong Common Council, weak Mayor System. While the Mayor controls the day-to-day operations of the City, all ordinances, laws and budget matters are ultimately decided by the Common Council. The Mayor leads the Council meetings but only has a vote in the event of a tie. All City department heads report to the Mayor on a day-to-day basis.

The City is also represented on the County level by two City supervisors who are elected every two years. One Supervisor serves Wards 1, 2 and 3 in the City (primarily the western portion of the City) and the other represents Wards 4, 5 and 6 (predominately the eastern section). The Supervisors only act as a representative for the City on the County level. They do not have a vote at the City level or serve on any City committees.

9.18.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.188-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.188-1 at the end of this annex illustrates the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.18-2. Recent and Expected Future Development

Type of Development	2016		2017		2018		2019		2020	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	0	-	0	-	1 (replaced existing home)	-	0	-	0	-
Multi-Family	0	-	0	-	0	-	0	-	0	-
Other (commercial, mixed-use, etc.)	0	-	0	-	0	-	0	-	0	-
Total	0	0	0	0	1	0	0	0	0	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development		
Recent Major Development and Infrastructure from 2015 to Present										
Norwich Shoe Apartments	Residential	34 units, 4 structures		136.41-1-7 (Main Structure)		Wildfire Interface Area		Residential		
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
None Identified at this time										

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.



9.18.4 Capability Assessment

The City of Norwich performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community’s adaptive capacity for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.18.4). The City of Norwich identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to the City of Norwich and where hazard mitigation has been integrated.

Table 9.18-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated? Describe how in comments.	Provide Mitigation Action # if applicable
Codes, Ordinances, & Requirements							
Building Code	Yes	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Local and State	Code Enforcement	Yes	N/A	N/A
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the “2015 I-Codes”), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017)..Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.							
Zoning Code	Yes	Chapter 575 Adopted 1981, amended 1997	Local	Code Enforcement, Planning	No	Yes	N/A
Comment: Article IX, Section 2, of the State Constitution and by the various state enabling statutes. In New York, the zoning enabling acts continue to require that zoning be undertaken “in accord with a well-considered plan” ¹¹ or “in accordance with a comprehensive plan.” ¹² Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes (described later herein), local officials must refer							



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<p>to the extensive body of case law to determine how zoning can meet the more general "comprehensive plan" requirement.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at local level</p> <ul style="list-style-type: none"> Chapter 575, Zoning. This chapter shall be known and may be cited as the "Zoning Ordinance of the City of Norwich." Except as provided in this chapter, no building, structure or premises shall be used or occupied, and no building or part thereof or other structure shall be erected, moved, placed, reconstructed, extended, enlarged or altered, except in conformity with the regulations herein specified for the district, as shown on the Zoning Map. Average Density Development and Planned Use Development are two techniques introduced in the Ordinance to allow for flexibility in design and development. The purpose of average density development is to permit variation in lot size in areas proposed for development within residential districts in order to encourage flexibility of design, to enable land to be developed in a manner sensitive to the natural physical features of the land, and to facilitate adequate and economical provision of streets and utilities. It is the intent of the Planned Use Development section of the Ordinance to provide for compatible development of a variety of land uses and to encourage innovations in development and renewal techniques to enable community demands to be met with greater flexibility, variety of style, design, and layout of sites and buildings, and efficient use of open spaces and other amenities, and that such development and innovation be in accordance with the Comprehensive Plan and supporting plans, policies and development objectives of the City of Norwich. 							
Subdivision Regulations	Yes	Chapter 490, Subdivision of Land Adopted 1962	Local	Planning Board	No	Yes	N/A
<p>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified in a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</p> <ul style="list-style-type: none"> The provisions of this chapter shall be held to be the minimum requirements adopted for the protection of the public health, safety and welfare. The provisions of this chapter shall be administered by the Planning Commission of the City of Norwich. No person shall subdivide any tract of land which is located within the City except in conformity with the provisions of this chapter. The provisions of this chapter shall be administered by the Planning Commission of the City of Norwich. No person shall subdivide any tract of land which is located within the City except in conformity with the provisions of this chapter. Lots subject to flooding and lots deemed by the Commission to be uninhabitable shall not be platted for residential occupancy, nor for such other uses as may increase danger to health, life or property or aggravate the flood hazard, but such land within the plat shall be set aside for such uses as shall not produce unsatisfactory living conditions. Preliminary Plat details shall include provisions for sewage disposal, drainage and flood control. Where a subdivision is traversed by a watercourse, drainageway, channel or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of such watercourse, and such further width or construction, or both, as will be adequate for the purpose. 							
Stormwater Management Regulations	Yes	Title 6, Ch. X,17-7,8,70	Local	Planning Board	Yes	No	-
<p>Comment: Codes Rules and Regulations of the State of New York, Title 6. Department of Environmental Conservation, Chapter X. Division of Water Resources, Subchapter A. General Article 3. State Pollutant Discharge Elimination System, Part 750. State Pollutant Discharge Elimination System(SPDES) Permits. New York Environmental Conservation Law, Article 17, Titles 7, 8 and Article 70. New development and redevelopment projects that result in a land disturbance of one acre or greater, including projects less than one acre if they are part of a larger common plan of development or sale or if controlling such activities in a particular watershed is require a permit by the Department</p>							
Post-Disaster Recovery Plan or Regulation	No	-	-	-	-	-	2021-Chenango County-001
<p>Comment:</p>							
Real Estate Disclosure	No	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	N/A	N/A
<p>Comment: In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure</p>							



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statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.							
Growth Management Regulation	No	-	Local	-	No	-	-
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.							
Site Plan Review	Yes	Adopted 1981	Local	Code Enforcement	No	No	-
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.							
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	-	Yes	N/A	N/A
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019							
Flood Damage Prevention Law	Yes	Chapter 273, Flood Damage Prevention, 2010	Local, State, Federal	Code Enforcement	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	N/A
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <ul style="list-style-type: none"> Chapter 273, Flood Damage Prevention. The Common Council of the City of Norwich finds that the potential and/ or actual damages from flooding and erosion may be a problem to the residents of the City of Norwich and that such damages may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. <p>It is the purpose of this local law to:</p> <ol style="list-style-type: none"> (1) regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; (2) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (3) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters; (4) control filling, grading, dredging and other development which may increase erosion or flood damages; (5) regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands, and; (6) qualify and maintain for participation in the National Flood Insurance Program. <ul style="list-style-type: none"> The areas of special flood hazard for the City of Norwich, Community Number 360161, are identified and defined on the following documents prepared by the Federal Emergency Management Agency: <ol style="list-style-type: none"> (1) Flood Insurance Rate Map Panel Numbers 36017C0241E, 36017C0242E, 36017C0243E, 36017C0244E, whose effective date is November 26, 2010, and any subsequent revisions to these map panels that do not affect areas under our community's jurisdiction. (2) A scientific and engineering report entitled "Flood Insurance Study, Chenango County, New York, All Jurisdictions," dated November 26, 2010. The Code Enforcement is hereby appointed Local Administrator to administer and implement this local law by granting or denying floodplain development permits in accordance with its provisions. A floodplain development permit is hereby established for all construction and other development to be undertaken in areas of special flood hazard in this community for the purpose of protecting its citizens from increased flood hazards and insuring that new development is constructed in a manner that minimizes its exposure to flooding. It shall be unlawful to undertake any development in an area of special flood hazard, as shown on the Flood Insurance Rate Map enumerated in Section 3.2, without a valid floodplain development permit. The following standards apply to all new subdivision proposals and other proposed development in areas of special flood hazard; (1) Proposals shall be consistent with the need to minimize flood damage; (2) Public utilities and facilities such as sewer, gas, electrical and water systems shall be located and constructed so as to minimize flood damage; and, (3) Adequate drainage shall be provided to reduce exposure to flood damage. No new construction, substantial improvements or other development in the floodway (including fill) shall be 							



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<p>permitted unless a technical evaluation determines no increase in flood levels. New and substantially improved residential and non-residential structures located in areas of special flood hazard, shall have the lowest floor (including basement) elevated to or above two feet above the base flood elevation.</p>							
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	-	Yes	No	-
<p>Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.</p>							
Emergency Management	Yes	Chapter 44 Updated 2009	Local	Maintained by Emergency Management Officer	Yes	N/A	N/A
<p>Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.</p>							
Climate Adaptation	No	-	Local	-	Yes	-	-
<p>Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.</p>							
Disaster Recovery Ordinance	No	-	-	-	-	-	2021-Chenango County-001
<p>Comment:</p>							
Disaster Reconstruction Ordinance	No	-	-	-	-	-	2021-Chenango County-001
<p>Comment:</p>							
Other Applicable Codes, Ordinances, & Requirements	Yes	-	-	-	-	-	-
<p>Comment: Chapter 281, Freshwater Wetlands, adopted on the 17th day of August 1976. Pursuant to § 24-0501 of the New York State Freshwater Wetlands Act (Article 24 of the New York Environmental Conservation Law), the City of Norwich shall fully undertake and exercise its regulatory authority with regard to activities subject to regulation under the Act in freshwater wetlands</p>							
<p>Planning Documents</p>							
Comprehensive Plan	Yes	Comprehensive Plan Adopted May 20, 2014	Local	Mayor's Office/Planning Department/Planning Commission	No	Yes	N/A
<p>Comment: Optional under NYS Law, municipality may adopt a comprehensive plan or proceed through a planning process which has evolved based on case law. (Per State Legislature General City Law section 28a, Town Law s. 272a, Village Law s. 7-722) **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones. Regulated at the local level</p> <ul style="list-style-type: none"> City of Norwich Comprehensive Plan, Adopted May 20, 2014. The focus of the comprehensive planning effort continues to be asset-based, building on community strengths and existing programs and efforts to: <ul style="list-style-type: none"> Improve livability through economic growth that creates new business and job opportunities, strengthens the downtown, expands the tax base and generates wealth and investment; Protect and enhance residential neighborhoods, expanding housing options by enhancing existing residential areas and creating new housing; and Enhance the appearance of and attractions to the City by building on its cultural assets including the Chenango County Council of the Arts, local museums in the recently designated Museum District and attractive historic homes and commercial structures. 							



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<ul style="list-style-type: none"> Since the seven goals established in the 2003 action plan are considered to be consistent with current community concerns, they have been retained in this update. The goals address municipal services, economic development, downtown Norwich, transportation, historic preservation, housing, and arts, culture and recreation. Much of the city is situated within a FEMA-designated flood hazard area, which requires homebuyers seeking mortgages to purchase flood insurance through the National Flood Insurance Program. The city experienced significant flood events in 2005 and 2006. Another flood event in 2011 affected the city less severely, while other areas of the Southern Tier Region were more severely affected. Flood mitigation strategies implemented by the Army Corps of Engineers and the City since the 1950s have drastically reduced the amount and severity of flooding within the City. Some flooding issues associated with stormwater runoff can be traced to the city's aging storm sewer system. Ongoing upgrades to the system and site containment design regulations imposed on new development are intended to better manage stormwater runoff. Citing flood damage that occurred north and south of city during the summer of 2006, the New York, Susquehanna & Western (NYSW) Railroad announced an embargo of the Utica Branch of the rail line, which passes through the city and county. In 2009, the City installed an automated stream level gauge system to provide better advance warning of potential flood events. 							
Capital Improvement Plan	No	-	Local	-	No	-	-
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.							
Disaster Debris Management Plan	No	-	Local	-	No	-	-
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.							
Floodplain or Watershed Plan	No	-	Local	-	No	-	-
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.							
Stormwater Plan	No	-	Local	-	No	-	-
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.							
Open Space Plan	No	-	Local	-	Yes	-	-
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.							
Urban Water Management Plan	No	-	Local	-	No	-	-
Comment:							
Habitat Conservation Plan	No	-	Local	-	No	-	-
Comment: Laws related to habit protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.							
Economic Development Plan	Yes	B.I.D. Norwich Business Improvement District Plan, approved 11/15/05	Local	BID Board of Directors	No	Yes	N/A



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<p>Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.</p> <ul style="list-style-type: none"> The Norwich Business Improvement District (BID) Management Association was incorporated under Section 402 of the Not-for Profit Corporation Law in 1992 and was determined to be a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. The BID essentially functions as a private sector organization in accordance with Article 19-A of the General Municipal Law. The BID will continue to enhance the safety, cleanliness, image and competitiveness of our downtown district by providing programs and services as determined necessary by members of the District as well as the BID Board of Directors. Presently, the lands within the District are used primarily for commercial and business purposes. Because Norwich is the county seat, other uses include governmental, office, and residential uses. Retail, restaurants, banks, professional offices and government uses are located along East & West Main Street and North & South Broad Streets The legislative body shall have the authority to exercise the following powers with respect to the District; Provide for the district improvements located on or within municipally or district owned or leased property which will restore or promote business activity in the district; provide for the operation and maintenance of any district improvements; and provide for additional maintenance or other additional services required for the enjoyment and protection of the public and the promotion and enhancement of the district. <p>Other Economic Development Planning:</p> <ul style="list-style-type: none"> City of Norwich Brownfield Opportunity Area Revitalization Plan, January 2018. This Revitalization Plan represents Step 2 of the Brownfield Opportunity Area (BOA) Program for the City of Norwich. The City of Norwich completed a Pre-Nomination study in January of 2009 that detailed a conceptual strategy for the City. This study produced an initial analysis of key properties and projects throughout the study area that have the potential to be returned to productive use as well as serve as catalysts for future revitalization. This report represents the second step in the planning process. The City's wastewater treatment plant, about a mile south of the city, has suffered repetitive and significant damage from flooding. After the latest flood in 2011, the plant suffered approximately \$800,000 in damages. This was the third major flood to impact the plant since 2005. Therefore, the plant needs to rent high capacity pumps to keep the plant online during flooding. The Perry Browne School is located in the Special Flood Hazard Area. While it has not suffered structural damages to date due to flooding, major flood events have threatened the structure and future risk to flooding is identified as a concern. Citing flood damage that occurred north and south of City during the summer of 2006, the New York, Susquehanna & Western (NYS&W) Railroad halted the Utica Branch of the rail line, which passes through the City and county. In 2008, NYS&W formally applied to the Surface Transportation Board for discontinuance of service. The City, County, and Commerce Chenango are actively engaged in trying to resume freight rail service along the line. After receiving substantial NYSDOT funds and other federal assistance, restoration along the tracks is in progress with completion scheduled for 2017. Upon completion, the project will permit restoration of NYS&W service between Binghamton and Utica and will provide freight access to the Norfolk Southern Railway and CSX lines. 							
Shoreline Management Plan	N/A	-	Local	-	Yes	N/A	N/A
<p>Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations</p>							
Community Wildfire Protection Plan	No	-	Local	-	No	-	-
<p>Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.</p>							
Forest Management Plan	No	-	Local	-	No	-	-
<p>Comment:</p>							
Transportation Plan	Yes	Comprehensive Plan Adopted May 20, 2014	Local	-	No	Yes	-
<p>Comment: A plan for an Integrated-Multi-Modal Transportation System is detailed within the 2014 City of Norwich Comprehensive Plan.</p>							
Agriculture Plan	No	-	Local	-	Yes	-	-
<p>Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.</p>							



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Other (tourism, business dev, etc.)	No	-	-	-	-	-	-
Comment:							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	Maintained by Emergency Management Officer	Yes	Yes	-
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	-	Yes	-	-
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.							
Post-Disaster Recovery Plan	No	-	-	-	-	-	2021-Chenango County-001
Comment:							
Continuity of Operations Plan	No	-	Local	-	No	-	-
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.							
Public Health Plan	Yes	2019-2021 Community Health Needs Assessment and Community Health Improvement Plan	County	Chenango County Health Department	Yes	Yes	N/A
Comment: Addresses need for heating/cooling centers, lack of homeless shelters and homeless services, vulnerable populations and need for access to community lifelines such as medical services and hospitals, emergency shelters, grocery/food stores. References to communicable diseases as a concern within the County, with objectives to coordinate vaccinations, testing, and healthy behaviors.							
Other: Emergency Response Plan	Yes	-	Local	-	No	-	-
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.							



Table 9.18-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes, Code Enforcement
Permits are tracked by hazard area. For example, floodplain development permits.	No, tracked by address
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No, minimal land/space available

Administrative and Technical Capability

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

Table 9.18-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Norwich Business Improvement District Management Association, Inc. (BIDMA)
Warning Systems / Services	Yes	Norwich/Chenango County NY EMO Phone App; Notify Chenango; Skywarn Program
Maintenance programs to reduce risk	No	-
Mutual aid agreements	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning/Community Development/City of Norwich/Planning Specialist
Engineers or professionals trained in building or infrastructure construction practices	Yes	Codes Enforcement Officer/City of Norwich/Code Officer
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Emergency Management
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	Yes	Chenango County Soil & Water Conservation District
NFIP Floodplain Administrator (FPA)	Yes	Codes Enforcement Officer/City of Norwich/Code Officer
Surveyor(s)	No	-
Emergency Manager	Yes	Emergency Management Office/City of Norwich/Director of Emergency Management
Grant writer(s)	Yes	Planning/Community Development/City of Norwich/Planning Specialist/Cornell Cooperative Extension
Resilience Officer	No	-
Other	-	-



Fiscal Capability

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

Table 9.18-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use
Community development Block Grants (CDBG, CDBG-DR)	Yes (not applicable to most projects in this plan)
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
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other	No

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the City of Norwich.

Table 9.18-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Handled by Emergency Management during an emergency.
Personnel skilled or trained in website development?	No, contracted out
Hazard mitigation information available on your website; if yes, describe	Yes, Links to HMP and personal preparedness information from the Red Cross
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes, City of Norwich Emergency Management Facebook page
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Norwich/Chenango County NY EMO Phone App; Notify Chenango
Warning systems for hazard events; if yes, briefly describe.	Norwich/Chenango County NY EMO Phone App; Notify Chenango; Emergency Operations Center
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Unknown
Other	-

Community Classifications

The table below summarizes classifications for community programs available to the City of Norwich.

Table 9.18-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A





Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO Fire Protection Classes 1 to 10)	No	N/A	N/A
NYSDEC Climate Smart Community	No	NP	N/A
Storm Ready Certification	Yes	N/A	April 2001
Firewise Communities classification	No	NP	N/A
Other	-	-	-

Note:

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

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2016). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.18-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	Medium
Drought	Medium
Extreme Temperatures	Medium
Flood	Medium
Harmful Algal Bloom	Medium
Invasive Species	Medium
Natural Gas	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

- *High Capacity exists and is in use
- Medium Capacity may exist; but is not used or could use some improvement
- Low Capacity does not exist or could use substantial improvement
- Unsure Not enough information is known to assign a rating

National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

Amy Donnison, City Code Enforcement Officer

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the City of Norwich.



Table 9.18-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
City of Norwich	194	201	\$1,411,677	42	-	163

Source: FEMA 2019

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of July 31, 2019. The total number of repetitive loss properties does not include severe repetitive loss properties. SRL property information was not included in the available data set.

RL Repetitive Loss; SRL Severe Repetitive Loss

Resources

The City Code Enforcement Officer serves as the NFIP Floodplain Administrator. The Code Enforcement Office is responsible for building permits and inspections, zoning compliance, ZBA special permits, and fire/life safety inspections including evacuation training and property maintenance inspections. The Code Enforcement Office also oversees common code violations such as unsafe buildings and constriction permits. The City Planning Department works with the Code Enforcement Office to preform environmental planning, long-range neighborhood planning, and review of development proposals and permits.

The County Planning Board preforms NYS 239 Reviews for required building permits.

Compliance History

The community is currently in good standing in the NFIP and has no outstanding compliance issues. The City of Norwich has completed Community Assistance Visits (CAV), with the most recent visit completed in 2016.

Regulatory

The City of Norwich Flood Damage Prevention Ordinance (FDPO) was last updated on October 19, 2010. The City’s floodplain management program meets minimum requirements.

Additional Areas of Existing Integration

- The City will update their existing Comprehensive Emergency Management Plan once the County completes updating their plan.
- The City updated their Comprehensive Plan in 2014. A comprehensive plan provides goals, objectives, guidelines and policies for the immediate and long-range protection, enhancement growth and community development. The updated plan contains seven goals with subsequent actions.
- The City has their ordinances available on their website. Please visit <http://ecode360.com/NO0235> to see the City of Norwich's codes and ordinances, including their flood damage prevention ordinance.
- The City's website also has 'Norwich News' board that holds information on current events, City meetings, and public health and safety advisories. The City also has a 'Weather and Emergency Info' page on their website that displays current weather information, watches and warnings. The City of Norwich/Chenango County Emergency Operations Center has several social media outlets that provide the public information regarding weather and public health and safety advisories.
- The City continues to utilize and promote a mass notification system that allows us to email, text or call residents in the event of an emergency. This system has been used multiple times for reverse notifications during potential flood situations. All alerts are also automatically posted to our emergency management Twitter and Facebook pages.
- The City and County joined together to develop a smartphone app for Android and iOS phones. This allows the City and County to send push notifications to those who have downloaded our app.



- All City fire, Police, Emergency Management and Public Works employees receive ICS/NIMS training consistent with the NIMSCast requirements.

Evacuation, Sheltering, Temporary Housing, and Permanent Housing

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Evacuation Routes

NY-12 and NY-23 should be used for evacuation within the City of Norwich. However, as road conditions and availability of routes change, residents should refer to the City Emergency Management Website, or alerts on the Norwich/Chenango County NY EMO smartphone app for up-to-date evacuation routes.

Sheltering

The following are identified as shelter locations by the American Red Cross National Sheltering Survey, but for current openings and availability, residents should refer to the City Emergency Management Website or Norwich/Chenango County NY EMO smartphone app:

- Emmanuel Episcopal Church
- First Baptist Church of Norwich
- DCMO/BOCES Occupational Center
- Norwich High School
- Norwich Middle School
- Saint Bartholomew Church
- Stanford-Gibson Primary School

Temporary Housing

The City of Norwich has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. In the event temporary housing is needed, the City will work with the county to find suitable locations using the locations identified in Section 4 (County Profile) Table 4-9 as a starting point.

Permanent Housing

While the City did not identify potential locations for permanent housing, as part of the planning process, a countywide buildable land analysis was conducted and presented in Section 4 (County Profile). The City can utilize this analysis to identify potential locations.

9.18.5 Hazard Event History Specific to the City of Norwich

Chenango County has a history of natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) 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 City of Norwich's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Chenango County. Table 9.188-11 provides details regarding municipal-specific loss and damages the City experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.



Table 9.18-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
August 1, 2016	Flash Flood	No	Isolated thunderstorms produced torrential rainfall across central New York, resulting in flash flooding on small streams and across roadways. Mudslides were reported near the border of Chenango and Otsego counties.	Torrential rainfall exceeding 3 inches in under 2 hours caused severe urban flooding in Norwich with approximately 14 roads closed at one time and three culvert washouts. Approximately \$50,000 in property damages were recorded.
April 16, 2017	Thunderstorm Wind	No	A cold front brought severe showers and thunderstorms ahead of an unstable warm air mass as it moved east across the region.	Winds reaching 50 mph downed trees and wires.
May 1, 2017	Thunderstorm Wind	No	A warm front created an unstable air mass across New York State and Pennsylvania, producing a line of thunderstorms. Winds reached speeds between 70 and 100 mph and numerous trees were knocked down, resulting in widespread power outages.	Microburst winds ranging between 90 to 100 mph were recorded near Binghamton. At least 100 healthy trees were snapped or uprooted around the City of Norwich reservoir along route 23.
August 12, 2017	Thunderstorm Wind	No	Severe storms produced damaging winds and large hail as they moved across the region.	This thunderstorm produced severe winds and knocked over several trees in the area.
May 4, 2018	Thunderstorm Wind	No	A warm front merging with an area of low pressure resulted in a line of severe thunderstorms across central New York.	Thunderstorm winds blew numerous trees and wires down on Cortland Street with wires causing a grass fire. An estimated \$10,000 in property damages were recorded.
November 1, 2019	Flood	No	Rainstorms and thunderstorms developed ahead of a low pressure system, bringing 1 to 3 inches of rain throughout the region, with localized amounts reaching 5 inches. Several periods of flash flooding occurred.	The Canasawacta Creek rose rapidly and flooded portions of the City of Norwich. Twenty-five homes and one business were affected with damages totaling about \$750,000.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)
- N/A Not applicable

9.18.6 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the City of Norwich’s risk assessment results and data used to determine the hazard ranking.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to





provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.

Critical Facilities

New York Department of Environmental Conservation (DEC) Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a Special Flood Hazard Area (SFHA) unless constructed according to specific mitigation specifications, including being raised 2’ above the Base Flood Elevation (BFE). This statute is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, the State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 500-year flood even, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.18-12. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Chenango County Highway Department	County Building	Yes	Yes	2021-Chenango County-003
Norwich Canasawacta Creek	Levee	Yes	Yes	2021- C. Norwich-002
Chentronics, LLC	Major Employer	Yes	Yes	2021-C. Norwich-004
Greater Opportunities for Broome and Chenango Inc.	Major Employer	Yes	Yes	2021-C. Norwich-004
Valley View Skilled Nursing Home	Major Employer	Yes	Yes	2021-C. Norwich-004
Water Tank	Potable Water Facility	Yes	Yes	2021- C. Norwich-001
Wastewater Treatment Facility	Wastewater Facility	Yes	Yes	2021- C. Norwich-001
Chenango County Office Building	County Building	No	Yes	2021-Chenango County-004
Catholic Charities	Major Employer	No	Yes	2021-C. Norwich-004
Marlene Meadows Apartments	Senior Center	No	Yes	2021-C. Norwich-004

Source: HAZUS-MH 4.2



Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Chenango as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Norwich. The City of Norwich has reviewed the county hazard risk/vulnerability risk ranking table as well as its individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the City of Norwich indicated the following:

- Agreement with calculated rankings – no changes made.

Table 9.18-13. Hazard Ranking Input

Disease Outbreak	Drought	Extreme Temperature	Flood	Harmful Algal Bloom	Invasive Species	Natural Gas	Severe Storm	Severe Winter Storm	Wildfire
High	Medium	High	High	Low	Medium	Low	High	Medium	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

*The municipality changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the municipality

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- The major problem areas in our community are along the Canasawacta Creek on the west and south sides of the City and the Chenango River on the east side of the City. Both areas have suffered from repetitive losses related to flooding, particularly in the last eight years. There's been damage to city infrastructure, including parks and the city pool, and also damage to dozens of houses. One property was bought out in a state buyout program after suffering unrepairable damage.
- In addition, the city's wastewater treatment plant, about a mile south of the city has suffered repetitive, and significant damage from flooding. In the latest flood in 2011, the plant suffered approximately \$800,000 in damages. This is the third major flood to impact the plant since 2005.
- The Perry Browne School is located in the Special Flood Hazard Area. While it has not suffered structural damages to date due to flooding, major flood events have threatened the structure and future risk to flooding is identified as a concern.
- There have been no injuries or loss of life in the City due to flooding in the past eight years.

Specific areas of concern based on resident response to the Chenango County Hazard Mitigation Citizen survey include:

- River areas in City of Norwich: need flood gauge restores at River Street/Route 23 bridge
- Anywhere along the Canasawacta Creek. Prior to the Kurt Beyer dam removal, flooding in the Plymouth St. area of Norwich - still a concern if blockage below town. Now flooding consistently in the lower S. Broad St. area of Norwich as well as Oxford.





- I think the Canasawacta Creek bed should be excavated to increase capacity. Dead trees along banks should be removed.
- City of Norwich water and wastewater plants
- Marconi Ave. where it meets Burr Ave. Always water in the road after a heavy rain. Near CDO workforce office as well is the absolute worst.
- South Broad Street near Prentice St has flooded consistently since the bridge icy McDonalds on South Broad Street was put in. The street floods in that area even with just a hard rainfall. Canasawacta creek has not been properly cleaned and in emergency situations, floods over its banks
- South Broad Street Creek area by Mc Donald's River Flooding east main street
- Most anything along the River
- Property along Canasawacta Creek
- S. Broad St., Norwich around McDonalds, Prentice St., E. Main St.
- County alerts should be made through Chenango County Scanner Nerds.

9.18.7 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2015 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 9.18-14. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
CNR-1	Upper Reservoir Dredging	Flood, Severe Storm	City of Norwich DPW, Emergency Management	Dredge the Upper Reservoir, to allow more water capacity, particularly during heavy rain and water flow times	No Progress	Cost	-	Continue as part of 2021-C. Norwich-002
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CNR-2	Citywide Water and Sewer Line Survey	Flood, Severe Storm	City of Norwich DPW	Use special video cameras to explore potential problem areas in the City's water and sewer lines. This helps find problem areas before they become larger issues. It also ensures full capacity, particularly during flood events by making sure there is nothing blocking the lines.	Ongoing	Cost	-	This is part of the day-to-day operations of the City DPW
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CNR-3	WWTP Flood Mitigation	Flood, Severe Storm	City of Norwich DPW	Install a stabilization pond to receive wastewater and then build a new structure on higher ground to incorporate the city's screw pumps for processing wastewater. Assure that the mitigation efforts for this critical facility address protection to the 500-year flood event or "worst damage scenario".	No progress	Cost	-	Continue as 2021-C. Norwich-001
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CNR-4 (old CN-12)	Residential Floodproofing	Flood, Severe Storm	City of Norwich Code Enforcement,	Encourage residents to flood proof existing structures, particularly basements, and seek grants to provide	Ongoing	Cost	-	This is part of the day-to-day operations of the City OEM
						Level of Protection	-	
						Damages Avoided;	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Emergency Management	funding for residents to complete such work.		Evidence of Success		
CNR-5 (old CN-11)	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 include: 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.	All Hazards	Chenango County, as supported by relevant local department leads	See Above.	Ongoing	Cost	-	This is part of the day-to-day operations of the City
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CNR-6	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with 13 repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress). Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.							
	See above.	Flood, Severe Storm Wildfire, Severe Winter Storm	Engineering via NFIP FPA with NYS DHSES, FEMA support	See above.	Ongoing	Cost	-	This is part of the day-to-day operations of the City
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The City of Norwich has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2015 Plan:

- None Identified

Proposed Hazard Mitigation Initiatives for the Plan Update

The City of Norwich worked with the consultant and the Chenango County Department of Planning & Development after attending the mitigation action workshop held on January 13, 2021. They were provided access to FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards including FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013); Types of Mitigation Actions; and a link to the FEMA Individual and Community Preparedness Division (ICPD) Protective Actions Research website (<https://community.fema.gov/ProtectiveActions/s/>).

Table 9.18-15 summarizes the comprehensive-range of specific mitigation initiatives the City of Norwich would like to pursue in the future to reduce the effects of hazards. 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

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 your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.18-16 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.18-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-C. Norwich-001	WWTP Upgrades	1, 2, 3, 4, 6, 7	Flood, Severe Storm, Severe Winter Storm	<p>Problem: The existing screw pumps at the WWTP are partially underground, partially above ground and when the facility experiences flooding, the area that the screw pumps are encased in burn out and experiences damages. The City therefore has had to rent pumps to keep the facility operational; during large flood events, the facility has had to discharge partially treated water into the river.</p> <p>Solution: The City will replace the existing screw pumps with submersible screw pumps that are able to function underwater to alleviate shutdown of the facility and the need to discharge excess sewage into the river. This will help eliminate the need to shutdown the pumps at the facility which is the main issue and minimize additional discharge events, caused by flooding and excess water overtaking the facility.</p>	Yes ●	No	Short, To begin as soon as possible	Norwich DPW	High; A previous estimate was quoted around \$4 million	High, Minimizes additional sewage discharge and flood damages to WWTP facility	FEMA HMA, BRIC	High	SIP, NSP	PP, NR, SP
2021-C. Norwich-002	Flood Study for South End of City	All Goals	Flood, Severe Storm, Severe Winter Storm	<p>Problem: There has been repeated flooding of private residences and businesses along the south portion of the City. Previously residents have been displaced from their homes and many cannot afford flood insurance and pay for repairs out of pocket. Much of the flooding is basement flooding, and damages experienced to water heaters, furnaces, electric panels, etc. but do not qualify for first floor flooding assistance. Flooding comes from the creek but can be related to snow melt, ice jams, and heavy rains.</p> <p>Solution: This would be a two phase project to identify flood</p>	Yes ●	No	Short, To begin as soon as possible	Norwich DPW, support from Norwich Code Enforcement	Low to conduct flood study; Medium-High to implement findings	High, Goal to eliminate flood risk and property damages	Municipal budget to cover costs of flood study,	High	LPR, SIP	PR, SP, NR



Table 9.18-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				vulnerabilities and causes, and best solutions for the area to reduce damages. The first phase would be to contract an engineer to conduct the study and flood analysis. The City FPA will support the engineer in conducting the study. The city suggests that a possible solution would be to install a brim along the creek to reduce flood damages, however, will follow the recommendations of the engineering study. Once the study is complete, the City will implement the findings and apply to funding or other technical support as necessary.										
2021-C. Norwich-003	Outreach to RL property owners	1, 2, 3, 5, 7	Flood	Problem: There are 42 repetitive loss properties and 163 properties located within the 1% SFHA in the City. Solution: The City Floodplain Administrator will conduct outreach to homeowners who have experienced repetitive losses, or are living within the floodplain, and present options for structural mitigation or relocation. If there are enough interested parties, the City will support grant applications for flood mitigation of the interested properties, including project support and development.	No	No	Short, To conduct outreach as soon as possible	City of Norwich Code Enforcement	Low to conduct outreach	High, Goal to eliminate RLs and property damages	Municipal Budget, FEMA FMA	Medium	LPR, EAP	PR, PP, PI
2021-C. Norwich-004	Outreach to Critical Facility owners	1, 2, 3, 5, 7	Flood	Problem: There are numerous critical facilities, including major employers, and senior centers, located within the floodplain that have experienced damages during previous flooding events. Solution: The City Floodplain Administrator will conduct outreach to the property owners and present options for structural mitigation. If interested, the City will support grant	No	No	Short, To conduct outreach as soon as possible	City of Norwich Code Enforcement	Low to conduct outreach	High, Eliminates closures of essential facilities and ensures safety of senior residents	Municipal Budget, FEMA FMA	Medium	LPR, EAP	PR, PP, PI



Table 9.18-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				applications for flood mitigation of the interested properties, including project support and development.										

Notes:

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

Acronyms and Abbreviations:

- CAV Community Assistance Visit
- CRS Community Rating System
- DPW Department of Public Works
- EHP Environmental Planning and Historic Preservation
- 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
- BRIC Building Resilient Infrastructure and Communities

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Critical Facility:

Yes Critical Facility located in 1% floodplain

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

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.



- *Property Protection (PP)* - These actions 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 acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)* - 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 educational programs for school-age children and adults.
- *Natural Resource Protection (NR)* - 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.
- *Structural Flood Control Projects (SP)* - 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.
- *Emergency Services (ES)* - 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

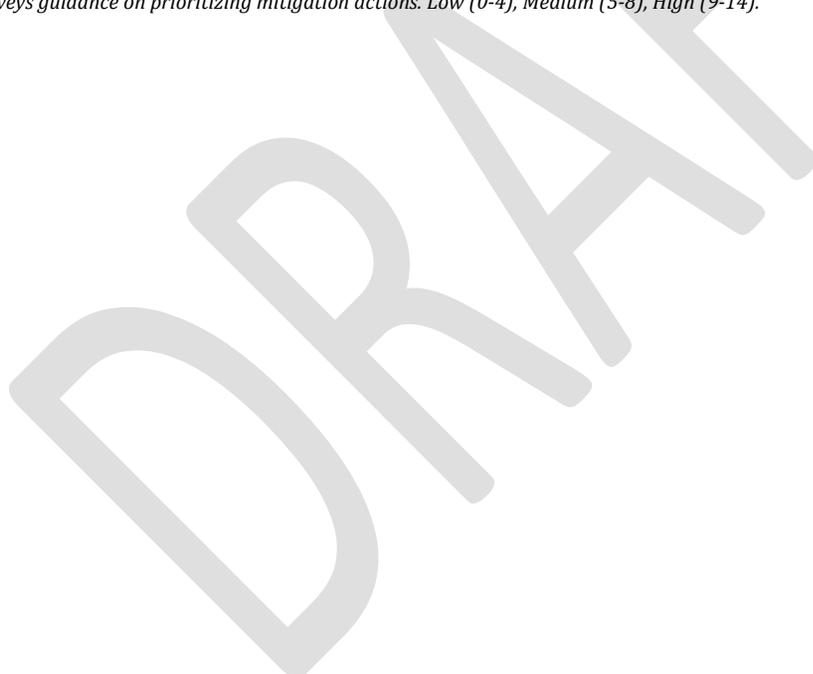
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Table 9.18-16. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2021-C. Norwich-001	WWTP Upgrades	1	1	1	1	1	1	0	0	0	1	1	1	1	1	11	High
2021-C. Norwich-002	Flood Study for South End of City	1	1	1	0	1	1	1	0	0	1	1	1	1	1	11	High
2021-C. Norwich-003	Outreach to RL property owners	1	1	1	1	0	0	0	0	0	1	0	1	1	1	8	Medium
2021-C. Norwich-004	Outreach to Critical Facility owners	1	1	1	1	0	0	0	0	0	1	0	1	1	1	8	Medium

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).





9.18.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.18-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak										
Drought										
Extreme Temperatures										
Flood	003, 004	001, 002	001, 002		002, 003, 004	001, 003, 004	003, 004	001, 002	001, 002	
Harmful Algal Bloom										
Invasive Species										
Natural Gas										
Severe Storm		001, 002	001, 002		002			002	002	
Severe Winter Storm		001, 002	001, 002		002			002	002	
Wildfire										

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.18.9 Staff and Local Stakeholder Involvement in Annex Development

The City of Norwich followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many City departments, including: Emergency Management, the Fire Department, and Code Enforcement. The Emergency Management Officer represented the community on the Chenango County Hazard Mitigation Plan Planning Partnership, Steering Committee, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

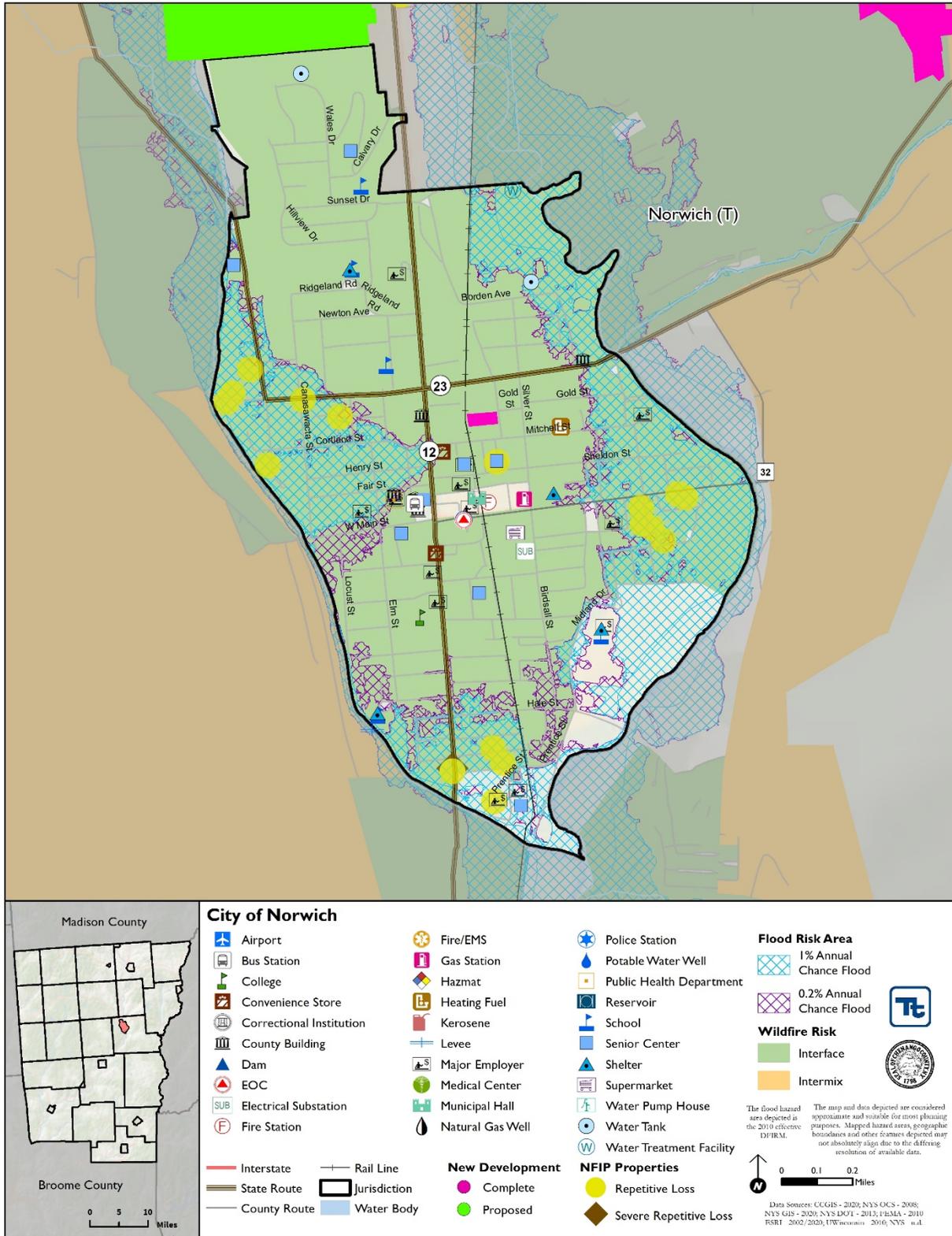
Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

9.18.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the City of Norwich that illustrates the probable areas impacted within the municipality. 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. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the City of Norwich has significant exposure. The map is illustrated below.



Figure 9.18-1. City of Norwich Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	2021-C. Norwich-001		
Project Number:	WWTP Upgrades		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, Severe Winter Storm		
Description of the Problem:	The existing screw pumps at the WWTP are partially underground, partially above ground and when the facility experiences flooding, the area that the screw pumps are enmeshed in burn out and experiences damages. The City therefore has had to rent pumps to keep the facility operational; during large flood events, the facility has had to discharge partially treated water into the river.		
Action or Project Intended for Implementation			
Description of the Solution:	The City will replace the existing screw pumps with submersible screw pumps that are able to function underwater to alleviate shutdown of the facility and the need to discharge excess sewage into the river. This will help eliminate the need to shutdown the pumps at the facility which is the main issue and minimize additional discharge events, caused by flooding and excess water overtaking the facility.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	500-year flood	Estimated Benefits (losses avoided):	Minimizes additional sewage discharge and flood damages to WWTP facility
Useful Life:	50 years	Goals Met:	1, 2, 3, 4, 6, 7
Estimated Cost:	High \$4 million	Mitigation Action Type:	SIP, NSP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	ASAP
Estimated Time Required for Project Implementation:	1-2 years	Potential Funding Sources:	FEMA HMA, BRIC
Responsible Organization:	Norwich DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Relocate WWTP	N/A	No municipal land to relocate, would need to reroute sewer pipes, not cost effective
	Continue to use temporary pumps during floods to ensure operations	\$10,000/flood	Short term solution, not cost effective in long term, does not mitigate, climate change will increase flood risk and need for temporary pumps
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2021-C. Norwich-001	
Project Number:	WWTP Upgrades	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Ensures clean water
Property Protection	1	
Cost-Effectiveness	1	Long-term solution
Technical	1	City DPW can support install of project
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	Norwich DPW
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2021-C. Norwich-002		
Project Number:	Flood Study for South End of City		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm, Severe Winter Storm		
Description of the Problem:	There has been repeated flooding of private residences and businesses along the south portion of the City. Previously residents have been displaced from their homes and many cannot afford flood insurance and pay for repairs out of pocket. Much of the flooding is basement flooding, and damages experienced to water heaters, furnaces, electric panels, etc. but do not qualify for first floor flooding assistance. Flooding comes from the creek but can be related to snow melt, ice jams, and heavy rains.		
Action or Project Intended for Implementation			
Description of the Solution:	This would be a two phase project to identify flood vulnerabilities and causes, and best solutions for the area to reduce damages. The first phase would be to contract an engineer to conduct the study and flood analysis. The City FPA will support the engineer in conducting the study. The city suggests that a possible solution would be to install a brim along the creek to reduce flood damages, however, will follow the recommendations of the engineering study. Once the study is complete, the City will implement the findings and apply to funding or other technical support as necessary.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	500-year flood	Estimated Benefits (losses avoided):	Goal to eliminate flood risk and property damages in area
Useful Life:	99 years	Goals Met:	All Goals
Estimated Cost:	Low to conduct flood study; Medium-High to implement findings	Mitigation Action Type:	Phase 1: LPR; Phase 2: SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	To being as soon as possible
Estimated Time Required for Project Implementation:	6 months for flood study; 1-2 years to implement findings as funding is available	Potential Funding Sources:	Municipal budget to cover costs of flood study, FEMA BRIC or other to implement findings
Responsible Organization:	Norwich DPW, support from Norwich Code Enforcement	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Planning, Community Development
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Relocate all properties and businesses	N/A	City loses large tax base, unfeasible
	Redirect the Chenango River and Canasawacta Creek away from development	N/A	Southern portion of City is located directly between waterbodies, unfeasible and not environmentally sound
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2021-C. Norwich-002	
Project Number:	Flood Study for South End of City	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Many RL properties and businesses are in this area
Property Protection	1	
Cost-Effectiveness	1	Flood study in Phase 1 will determine best course of action
Technical	0	City will need to hire an engineer
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	Flooding, sever storms, snow melt, and ice jams cause flooding issues in this area
Timeline	1	To be completed within scope of HMP
Agency Champion	1	
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	