9.5 Village of Bainbridge

This section presents the jurisdictional annex for the Village of Bainbridge. 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 Village participated in the planning process; an assessment of the Village of Bainbridge's risk and vulnerability; the different capabilities utilized in the Village; and an action plan that will be implemented to achieve a more resilient community.

9.5.1 Hazard Mitigation Planning Team

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

Table 9.5-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Philip Wade, Mayor Village of Bainbridge, 33 W. Main St., 13733 914-582-7289 bainbridgemayor@gmail.com	Jay Campbell, Deputy Mayor Village of Bainbridge, 33 W. Main St., 13733 607-244-7289 timjaylibby@gmail.com
NFIP Floodplain Administrator	
Name/Title: Steve Fox, Chenango County Code Enforcement Address: 5 Court St. Norwich, NY 13815 Phone Number: 607-316-0403 Email: stevenf@co.chenango.ny.us	

9.5.2 Municipal Profile

The Village of Bainbridge is the commercial and residential center of the Town of Bainbridge. The Village is on the West Bank of the Susquehanna River at the junction of State Routes 7 and 206. The Village is 32 miles north of the City of Binghamton on the Pennsylvania border and only 175 miles west of New York City.

Bainbridge traces its history back to the Sullivan-Clinton Expedition in 1779 to clear the Susquehanna Valley of Indians. On May 6, 1786 land grants established 64 lots of 640 acres in the area of the Village of Bainbridge to the original settlers. The original settlement was named Jericho. The first official town meeting was held in1791. On April 15, 1814, Jericho became Bainbridge, named after Commodore William S. Bainbridge. The Village of Bainbridge was incorporated in 1829.

The Village of Bainbridge is governed by a Mayor and four-member Board of Trustees. The Village has three departments headed by an appointed Clerk/Treasurer, an appointed Superintendent of Public Works, and an appointed Police Chief. The Village operates a water distribution system and a municipal wastewater treatment plant. The Village has two volunteer boards; Planning and Zoning Board of Appeals. This governing body will assume responsibility for adoption and implementation of this plan.

According to the U.S. Census, the 2010 population for the Village of Bainbridge was 1,335. The estimated 2018 population was 1,442, a 6.4 percent increase from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 6.3 percent of the population is 5 years of age or younger and 17.5 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.5.3 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 9.5-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.5-1 at the end of this annex illustrates the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.5-2. Recent and Expected Future Development

Type of Development	2015		2016		2017		2018		2019	
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	-	0	-	0	-	0	-
Multi-Family	0	-	0	-	0	-	0	-	0	-
Other (commercial, mixed-use, etc.)	0	-	0	-	1	-	0	-	1	-
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**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					
None					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None					

SFHA Special Flood Hazard Area (1% flood event)

** Only location-specific hazard zones or vulnerabilities identified.*

9.5.4 Capability Assessment

The Village of Bainbridge 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 9.5.4). The Village of Bainbridge identified specific integration activities that will be incorporated into municipal procedures are

included in the updated mitigation strategy. Appendix G provides the results of the planning/policy document review and the answers to integration survey questions.

Planning, Legal, and Regulatory Capability

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

Table 9.5-3. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has 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, County, State	Admin. By Chenango County	Yes	Yes	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	Adopted 5/10/1993	Local	Village Code Enforcement	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 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							
Subdivision Regulations	Yes	Adopted 2019, Article 7 of the Village Law	Local	Village Code Enforcement	No	Yes	N/A
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 i 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). • By the authority of resolution of the Board of Trustees of the Village of Bainbridge, adopted pursuant to the provisions of Article 7 of the Village Law, the Planning Board has been authorized and empowered to approve plats for subdivisions within the village. The purpose of these regulations and the districts as outlined on the Zoning Map[1] is to provide for orderly growth in accordance with a Comprehensive Plan, to lessen congestion in streets, to secure safety from fire, flood and other dangers, to provide adequate light and air, to prevent overcrowding of land, to avoid undue concentration of population, to facilitate the adequate provision of transportation, water, sewage disposal, school, parks and other public requirements and to promote the health, safety and general welfare of the public. Land to be subdivided for building purposes shall be such that it can be used safely without danger to health, peril from flood or other menace. • The Village of Bainbridge is divided into zoning districts, including a Floodplain District. Floodplain zoning is intended to provide a means for the regulation of land uses in areas subject to flooding, for the protection of life and property values and for the public safety, health, welfare and convenience. The following uses shall be prohibited in a designated floodplain: (1) All residential, commercial, industrial and other buildings intended for human occupancy or employment, excluding recreational, agricultural and temporary uses. (2) All dumps, junkyards, excavation sites and storage of flammable liquids. (3) Sewage disposal and water supply facilities, except those approved by the State Department of Health. **The regulations set forth in Chapter 63, Flood Damage Prevention, will also apply to this District.**							
Stormwater Management	Yes	Zoning & Subdivision Ordinance	Local, County, State	Village Code Enforcement	Yes	Yes	N/A
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							

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? Describe how in comments	Provide Mitigation Action # if applicable
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							
Post-Disaster Recovery	No	-	-	-	No	-	2021-Chenango County-2021
Comment:							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	No	-
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 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	Yes	Within Subdivision Regulations or Floodplain regulations / Zoning Code	Local	Chenango County Planning	No	Yes	N/A
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	General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a	Local	Village Code Enforcement	No	Yes	N/A
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	SEQR code	Yes	Yes	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	Yes	Adopted 5/10/1993, Updated 11/1/2011	Federal, State, local	Administered by County Code Official under an MOU with Village	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	Yes	N/A
Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program. • A local law for Flood Damage Prevention as authorized by the New York State Constitution, Article IX, Section 2, and Environmental Conservation Law, Article 36. The Board of Trustees of the Village of Bainbridge finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Village of Bainbridge 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. In order to minimize the threat of such damages and to achieve the purposes and objectives hereinafter set forth, this local law is adopted. It is the purpose of this local law to: (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.							

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? Describe how in comments	Provide Mitigation Action # if applicable
• **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 (including proposals for manufactured home and recreational vehicle parks and subdivisions): (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. • Regulated residential and nonresidential structures in the SFHA must be elevated so the lowest floor is a minimum of two feet above the BFE. • **Critical Facilities** ; In order to prevent potential flood damage to certain facilities that would result in serious danger to life and health, or widespread social or economic dislocation, no new critical facility shall be located within any Area of Special Flood Hazard, or within any 500-year flood zone shown as a B zone or a Shaded X zone on the Community's Flood Insurance Rate Maps.							
Municipal Separate Storm Sewer System (MS4)	No	-	Federal	-	Yes	-	-
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.							
Emergency Management	No	-	Local	-	Yes	-	-
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.							
Climate Change Adaptation	No	-	Local	-	Yes	-	-
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.							
Disaster Recovery Ordinance	No	-	-	-	No	-	2021-Chenango County-001
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	No	-	2021-Chenango County-001
Comment:							
Other	No						
Comment:							
Planning Documents							
Comprehensive Plan	Yes	Adopted 2015	Local	Mayor and Board of Trustees	No	Yes	Limited in scope relative to Mitigation Measures
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 Adopted 2001 • The Village's mission is to become a vibrant, robust community to offer residents and businesses a progressive and safe environment to call home by collaboration with our business community, village residents and local government. 1. Provide safe streets and appealing neighborhoods 2. Maintain water and sewer systems 3. Maintain roads and sidewalks 4. Implement hazard mitigation activities • Of the Plans long term goals and objectives only one related to hazard mitigation; Embrace flood plain and waterfront by opening it up for recreation and events o Relocation of DPW to Village owned property out of flood plain							

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? Describe how in comments	Provide Mitigation Action # if applicable
o Explore waterfront grant to improve the area with docks and a pavilion for larger attractions. • The only implementation measure to advance mitigation in the Plan is the proposed use of federal programs for projects that are income based or flood related.							
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	Yes	-	State	NYSDEC permit and Federal Agencies	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	Yes	Zoning & Subdivision Ordinance	Local	Village Code Enforcement	No	Yes	N/A
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	-	No	-	-
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	No	-	Local	-	No	-	-
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.							
Shoreline Management Plan	N/A	-	Local	-	No	-	-
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations							
Community Wildfire Protection Plan	No	-	Local	-	No	-	-
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.							
Forest Management Plan	No	-	Local	-	No	-	-
Comment:							
Transportation Plan	No	-	Local	-	No	-	-
Comment:							
Agriculture Plan	No	-	Local	-	Yes	-	-

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? Describe how in comments	Provide Mitigation Action # if applicable
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers**.**							
Other	No						
Comment:							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	NYS Executive Law, Article 2B	Local	County OEM	Yes	Yes	NA
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)	Yes	-	County	County Emergency Management	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	-	-	-	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	Yes						
Comment: • Emergency Response Plan. Bainbridge Fire District							

Table 9.5-4. Development and Permitting Capability

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

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Bainbridge.

Table 9.5-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	While the Village does not have a Planning Board, they do have a Zoning Board of Appeals
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services	Yes	Hyper-Reach/Notify Chenango
Maintenance programs to reduce risk	Yes	Not Indicated
Mutual aid agreements	Yes	Fire Departments
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	County Planning & Development
Engineers or professionals trained in building or infrastructure construction practices	Yes	Available from Chenango County Code Enforcement
Planners or engineers with an understanding of natural hazards	Yes	County Highway
Staff with expertise or training in benefit/cost analysis	Yes	Contract
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	County Planning & Development
Scientist familiar with natural hazards	Yes	County Soil and Water Dept.
NFIP Floodplain Administrator (FPA)	Yes	Jeff Webb, Code Enforcement Officer with support from County Code Official per MOU
Surveyor(s)	Yes	County Highway
Emergency Manager	Yes	Chenango County EMS
Grant writer(s)	Yes	Consultant on retainer
Resilience Officer	No	-
Other	-	-

Fiscal Capability

The table below summarizes financial resources available to the Village of Bainbridge.

Table 9.5-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	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
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No

Financial Resources	Accessible or Eligible to Use (Yes/No)
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other	Yes

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Village of Bainbridge.

Table 9.5-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes, Mayor
Personnel skilled or trained in website development?	Yes, Mayor
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	Yes, has Facebook page to notify residents
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.	Yes, Chamber newsletter
Warning systems for hazard events; if yes, briefly describe.	Yes, Hyper-Reach/Notify Chenango
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Not Indicated
Other	-

Community Classifications

The table below summarizes classifications for community programs available to the Village of Bainbridge.

Table 9.5-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	NP	N/A
Public Protection (ISO Fire Protection Classes 1 to 10)	No	NP	N/A
NYSDEC Climate Smart Community	No	NP	N/A
Storm Ready Certification	No	NP	N/A
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 9.5-9. 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)

Steve Fox, Chenango County Code Enforcement

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Village of Bainbridge.

Table 9.5-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Village of Bainbridge	29	36	$679,420	18	-	18

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 County Building Code Enforcement Officer, Steve Fox, serves as the NFIP Floodplain Administrator and Building Inspector for the majority of municipalities within Chenango County.

Duties and responsibilities of the Code Enforcement Officer/NFIP FPA are permit review, and inspections for new construction and compliance with New York State and FEMA requirements. Records of losses and inspections, and development permits are kept in paper copies in the Code Enforcement office. The NYS DEC keeps records of repetitive loss properties within the County. The Village of Bainbridge has its own Planning/Zoning Board that approves Land Subdivisions.

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

Steve Fox has undergone the Certified Floodplain Manager (CFM) courses but did not take the exam and is not certified.

Compliance History

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

Regulatory

The Village of Bainbridge's Flood Damage Prevention Ordinance (FDPO) was last updated on October 12, 2010. The Village's floodplain management program meets minimum requirements. Floodplain management is supported by the actions of Chenango County Code Enforcement.

Additional Areas of Existing Integration

- **Site Plan Review:** When a Site Plan Review is done by the Planning Board, it is checked for runoff potential and compliance with floodplain regulations.
- **Tracking of Flood Damages:** Buildings damaged within the floodplain, even if less than 50% damaged, must be brought into 100% compliance with floodplain regulations.
- **Floodplain Management:** Continue local participation in NFIP, promote participation in the Community Rating System to lower flood insurance premiums, and inform public of availability of flood insurance.
- **Floodplain Management:** Consider non-structural flood hazard mitigation alternatives for at risk properties in close proximity to the Susquehanna River.
- **Infrastructure Protection/Floodplain Management:** Control flooding along Newton Creek by reinforcing the bank along the stream to prevent/control erosion. Prevention and maintenance will maintain the integrity.
- **Land Use Plans:** Develop tree trimming and removal program to keep trees from threatening lives, property and infrastructure during storm events.
- **Infrastructure Protection/Emergency Response Plan:** Purchase backup utilities for sewer and water systems including booster and lift stations.
- **Floodplain Management:** Consider participation in incentive-based programs such as CRS.
- **Floodplain Management/Public Education and Outreach:** Elevation of Homes in the flood plain is prohibitively expensive. Therefore as an alternative to reduce repetitive losses (7 in Village) we propose

to help homeowners by assisting them through education and requesting grants to raise utilities (e.g. water heaters, furnaces, electrical panels, etc.) above the flood plain. This will reduce future flood losses.

- **Floodplain Management:** Study the use of a berm to protect the area of repetitive flood damage from moderate level flooding. The area along the river bank from Walnut to Route 7 shows to be extremely low from visual observation. This will reduce future flood damages.

- **Infrastructure Protection:** Construct "Dry Hydrant" water system(s) to provide the ability to draw water from the river if needed to supplement the Village water supply in the occasion of a major fire. Water supply could fail due to flooding or wind storm bringing down power lines.

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

The Village has identified SR-206 and SR-7 as possible evacuation routes out. The bridge that crosses the Susquehanna River on SR-206 lies outside of the village but has potential to be a hazard area.

SR-7 lies on the bank of the Susquehanna River and experiences flooding at various spots both North and South of the Village, however outside of the Village limits.

Sheltering

Fire Hall has backup power and can be used as a sheltering location. The Bainbridge-Guilford High School is located outside of the flood plain and has a generator that provides power to a portion of the building in the event of an outage. The High School also has cots that can be used for temporary housing.

Temporary Housing

The mobile home park can be used as a temporary housing location and is located outside of the floodplain.

Permanent Housing

While the Village of Bainbridge 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 Village can utilize this analysis to identify potential locations.

9.5.5 Hazard Event History Specific to the Village of Bainbridge

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 Village of Bainbridge'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 9.5-11 provides details regarding municipal-specific loss and damages the Village 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 9.5-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January 7, 1966	Train derailment	No	A mechanical flaw caused 39 rail cars to derail in the center of the Village, causing extensive damage.	Two deaths were reported as a result of the crash, four cars were damaged, and the fire department and some homes were also damaged.
June 27-30, 2006	Flood (FEMA-DR-1650 and 1670)	Yes	The Village of Bainbridge was heavily impacted by major flooding during this period. The Susquehanna River rose to the 13-foot stage on June 27 and continued to rise to a record high of 27.03 feet on June 29.	A major employer in Bainbridge is the Amphenol Corporation, and the plant was damaged with 4-5 feet of water, causing the plant to close. An estimated $50 million in property damages were reported
September 8, 2011	Flood (FEMA-EM-3341)	Yes	The remnants of Tropical Storm Lee caused heavy rain up to 12 inches in most of the Susquehanna river basin, creating large flooding events throughout the area. A major flood in Bainbridge occurred with a river crest of 26.15 feet.	Property damages from river flooding were estimated at $150,000. Many homes within the floodplain were affected.
July 19, 2015	Severe Storm	No	Severe thunderstorms and heavy rain produced damaging winds (52 kts.) and large hail.	Numerous trees were blown down by severe winds resulting in $10,000 of property damages.
August 4, 2017	Severe Storm	No	Severe thunderstorms and heavy rain produced damaging winds (50 kts.) and large hail.	Trees fells and damaged power lines throughout the village, resulting in $2000 of reported property damages.

Notes:

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

9.5.6 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 Village of Bainbridge'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 9.5-12. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Sewer Treatment Plant	Utility	X	X	2021-V. Bainbridge-006
Electrical Substation	Utility	X	X	2021-T. Bainbridge-001
Wastewater Treatment Plant	Utility	X	X	2021-V. Bainbridge-004
Potable Water Well	Utility	X	X	2021-V. Bainbridge-001
Potable Water Well	Utility	X	X	2021-V. Bainbridge-001

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 Village of Bainbridge. The Village of Bainbridge 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 Village of Bainbridge indicated the following:

- Agreement with calculated rankings – no changes made.

Table 9.5-13. Hazard Ranking

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

- Homes adjacent to river that have experienced bank erosion
- River flood is primary risk
- School does not have backup power
- Windstorms are a potential problem – historically tornadoes
- Bank erosion on the creek that runs through the Village
- Communications and internet service are poor no high speed internet access
- County reverse 911 available

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

- Damage to homes and infrastructure (e.g. Water pumping and Sewage Treatment facilities) in the Flood Plain is the known and predictable hazard for the Village.

9.5.7 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 9.5-14. 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.
VBB-1	Address repetitive loss properties	Flood	Village of Bainbridge	Elevation of homes in the flood plain is prohibitively expensive. Therefore as an alternative to reduce repetitive losses (7 RL properties currently in Village) we propose to help homeowners by assisting them through education and requesting grants to raise utilities (e.g. water heaters, furnaces, electrical panels, etc.) above the floodplain. This will reduce future flood losses.	No progress	Cost	-	Discontinue – lack of property owner interest due to high costs.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
VBB-2	Berm Study	Flood	Village of Bainbridge, NYS DEC, USACE	Study the use of a berm to protect the area of repetitive flood damage from moderate level flooding. The area along the river bank from Walnut to Rt. 7 shows to be extremely low from visual observation. This will reduce future flood damages.	Complete	Cost	-	Discontinue per recommendation from Corps of Engineers.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
VBB-3	Construct "Dry Hydrant" water system(s)	Wildfire	Village of Bainbridge	Construct "Dry Hydrant" water system(s) to provide the ability to draw water from the river if needed to supplement the Village water supply in the occasion of a major fire. Water	No progress	Cost	-	Include in action plan but contingent on securing funding. See 2021-V. Bainbridge-003
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	

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.
				supply could fail due to flooding or wind storm bringing down power lines.				
(Former VBB-1)	Continue local participation in NFIP, promote participation in the Community Rating System to lower flood insurance premiums, and inform public of availability of flood insurance.	Flood	Village Trustees	Continue local participation in NFIP, promote participation in the Community Rating System to lower flood insurance premiums, and inform public of availability of flood insurance.	Ongoing	Cost Level of Protection Damages Avoided; Evidence of Success	- - -	Continue to participate if property owner interest. See 2021-V. Bainbridge-005
(Former VBB-2)	Consider non-structural flood hazard mitigation alternatives for at risk properties in close proximity to the Susquehanna River.	Flood	Village Trustees, FEMA, SEMO	Consider non-structural flood hazard mitigation alternatives for at risk properties in close proximity to the Susquehanna River.	Ongoing	Cost Level of Protection Damages Avoided; Evidence of Success	- - -	This is mostly a property owner education plan with action dependent on owner motivation. No funding exists to incentivize owners to take action.
(Former VBB-3)	Control flooding along Newton Creek	Flood	Public Works, DEC/COE	Reinforcing the bank along the stream to prevent/control erosion. Prevention and maintenance will maintain the integrity.	Complete	Cost Level of Protection Damages Avoided; Evidence of Success	- - -	Newton Creek floodway construction was performed by the Army Corps of Engineers in 1955.
(Former VBB-4)	Develop tree trimming and removal program to keep trees from threatening lives, property and	Severe Storm	Village Trustees, NYSEG	Develop tree trimming and removal program to keep trees from threatening lives, property and infrastructure during storm events.	Ongoing	Cost Level of Protection Damages Avoided; Evidence of Success	- - -	Village continues to budget for tree trimming and replacement.

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.
	infrastructure during storm events.							
(Former VBB-5)	Purchase backup utilities for sewer and water systems including booster and lift stations	All hazards	Village Trustees	Purchase backup utilities for sewer and water systems including booster and lift stations	Complete-backup generator purchased.	Cost	-	Complete – no further action needed.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
(Former VBB-7, 8)	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: • 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	All Hazards	Chenango County, as supported by relevant local department leads	See above	Ongoing Capability	Cost	-	Support of Federal, State, and County programming is an ongoing capability of the Village.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	

Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Bainbridge 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:

- NYDOT working on refurbishing 3 miles of State Route-206 through the Village from the Susquehanna River Bridge going West

Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Bainbridge 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 9.5-15 summarizes the comprehensive-range of specific mitigation initiatives the Village of Bainbridge 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 9.5-16 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.

Table 9.5-15. 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-V. Bainbridge-001	Alternate drinking water well(s)	2, 3, 6	Flood, Wildfire, Severe Storm	**Problem**: Well #1 one is one of the 2 wells used for drinking water and firefighting. The well is located in the 1% flood plain but is not protected from contamination or operation in the event of a flood event. (see also generator proposal for electric continuity for the wells). **Solution**: A 2 part project to assess the well house, plumbing, electric and chlorination system for possible flood proofing, and develop the engineering specs required. The assessment would also explore feasibility of a new well not in the flood plain. The second phase would implement the flood proofing or new well.	Yes	No	2 years	Village of Bainbridge DPW	$50K – $250K	Adequate drinking and firefighting water during flood events	FEMA FMA, HMGP, PDM, Village bonding, EFC borrowing and grants	High	SIP	PP
2021-V. Bainbridge-002	Relocate or elevate DPW garage	1, 2, 6	Flood	**Problem**: The Current Public Works Garage is located in the Susquehanna River floodway, approximately 100 yards from the river. The garage is inaccessible in the event of a flood and all Public Works vehicles and equipment stored in the garage are vulnerable to damage and/or loss in the event of flood. **Solution**: The Public Works Garage must be flood proofed and/or relocated. Proposed is a 2 phase project: First phase is to assess flood proofing alternatives and costs as well as estimated costs to relocate the garage to a site not in the floodway. Second phase is to implement either the flood proofing proposed or construct a new facility.	Yes	No	2 years	Village of Bainbridge DPW	$1-2 million	Avoid building and equipment losses during flood events	FMA, HMGP, PDM	High	SIP	PP
2021-V. Bainbridge-003	Dry Hydrant sourced by river	1, 2, 7	Wildfire	**Problem**: There is currently no alternative to the municipal water system for fire-fighting if wells or tank experience failure.	Yes	No	1 year	Village of Bainbridge DPW, Bainbridge	$15-20 K	Firefighting water source backup	PDM	Medium	SIP	ES

Table 9.5-15. 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
				Solution: Create a dry hydrant system on the river as alternate for reloading tankers				Fire Department						
2021-V-Bainbridge-004	Emergency Power System for wells	1	Flood, Severe Storm	**Problem**: Two floods in the past 17 years have resulted in power system failure at the water plant. **Solution:** The Village will purchase and install an automatic emergency power source not subject to flooding.	Yes	No	2 years	Village Board	Medium	Adequate drinking water during flood events	FMA, HMGP, PDM	High	SIP	PP
2021-V. Bainbridge-005	Flood proofing of houses and buildings in 1% flood plain	1, 2, 5	Flood	**Problem**: Approx. 50 homes and buildings are in 1% flood plain **Solution**: A combination of elevation and flood proofing for all homes and buildings in the flood plain	Yes	No	3-5 years	FEMA	$10-20 K per structure	Avoid building losses and relocation expenses during flood	FMA, PDM	Medium	SIP, EAP	PP
2021-V. Bainbridge-006	Sewer Treatment Plant Flood Protections	1, 3	Flood	**Problem:** The Village Sewer Treatment Plant is located within the 1% SFHA (100-year floodplain). **Solution:** The Village will conduct a flood vulnerability analysis and inspection of the sewer treatment facility and determine the extent of flood damages and risk posed. The details of the study will inform the village DPW to implement updates to rhe facility, including but not limited to, elevation of pumps and water tanks to ensure function, sealing and water proofing systems, or relocation of the facility.	Yes	No	2 years	Village Board, DPW	High	High	FEMA FMA	High	SIP	SP

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

Acronyms and Abbreviations: *Potential FEMA HMA Funding Sources:* *Timeline:*

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*
FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
PDM	*Pre-Disaster Mitigation Grant Program*
BRIC	*Building Resilient Infrastructure & Communities*

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*

Table 9.5-16. 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-V. Bainbridge-001	Alternate drinking water well(s)	1	1	1	1	1	1	-1	1	1	-1	0	1	1	1	9	High
2021-V. Bainbridge-002	Relocate or elevate DPW garage	0	1	1	1	1	1	-1	1	1	0	0	1	1	1	9	High
2021-V. Bainbridge-003	Dry Hydrant sourced by river	1	1	0	0	1	1	0	0	1	1	0	1	0	0	7	Medium
2021-V-Bainbridge-004	Emergency Power System for wells	1	0	1	1	1	1	0	1	1	1	0	1	1	0	10	High
2021-V. Bainbridge-005	Flood proofing of houses and buildings in 1% flood plain	0	1	1	1	1	0	1	1	1	1	0	0	0	0	8	Medium
2021-V. Bainbridge-006	Sewer Treatment Plant Flood Protections	1	0	1	1	1	1	0	1	1	1	0	1	1	0	10	High

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

9.5.8 Proposed Mitigation Action Types

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

Table 9.5-17. Analysis of Mitigation Actions by Hazard and Category

	FEMA			CRS						
Hazard	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Disease Outbreak										
Drought										
Extreme Temperatures										
Flood		001, 002, 004, 005, 006		005		001, 002, 004, 005			006	002
Harmful Algal Bloom										
Invasive Species										
Natural Gas										
Severe Storm		001, 004				001, 004				
Severe Winter Storm										
Wildfire		001, 003				001				003

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

9.5.9 Staff and Local Stakeholder Involvement in Annex Development

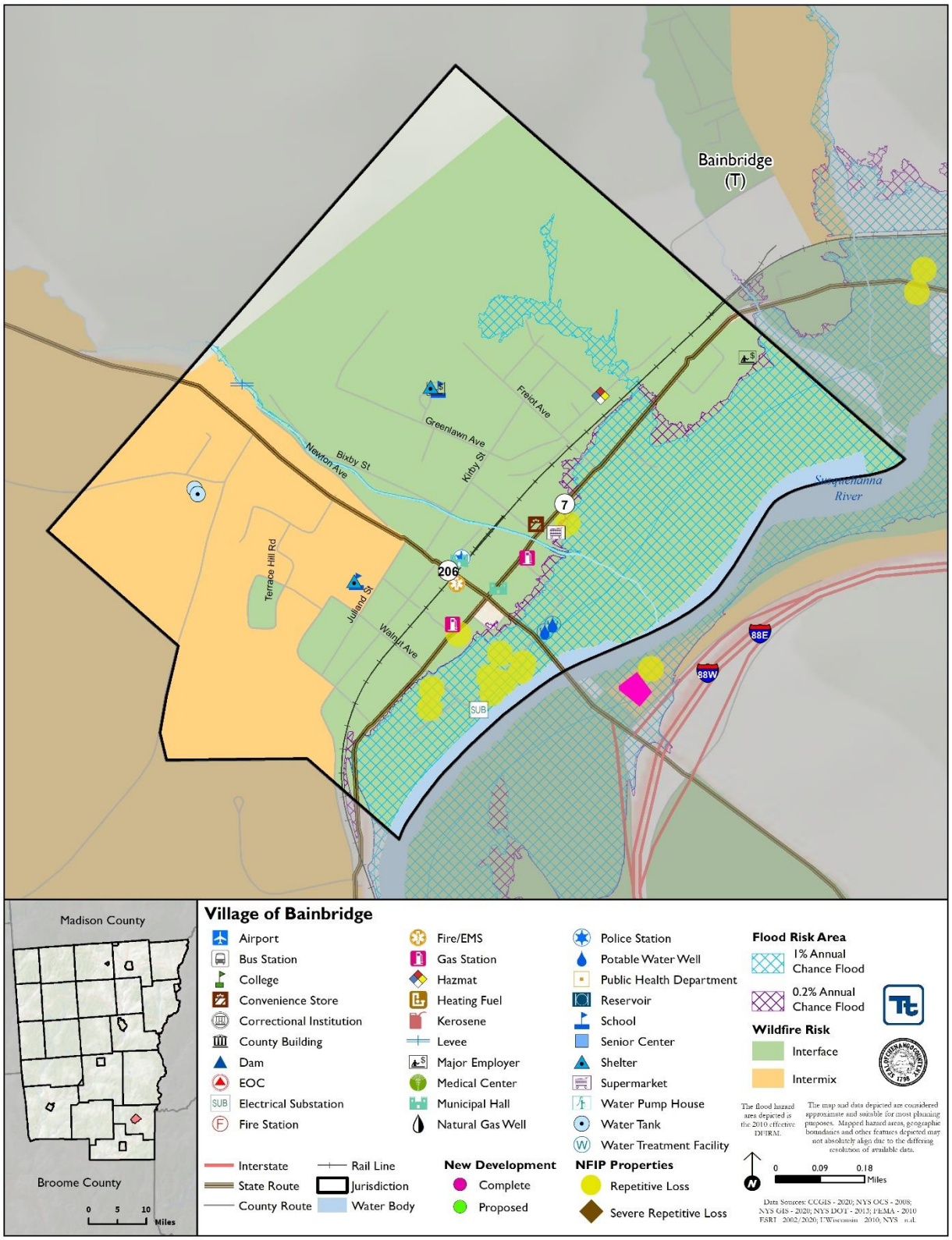
The Village of Bainbridge followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many Village departments, including: Mayor's Office, Village Board of Trustees. The Mayor and Deputy Mayor represented the community on the Chenango County Hazard Mitigation Plan Planning Partnership 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).

9.5.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Village of Bainbridge 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 Village of Bainbridge has significant exposure. The map is illustrated below.

Figure 9.5-1. Village of Bainbridge Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Relocate or elevate DPW garage		
Project Number:	2021-V. Bainbridge-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	The Current Public Works Garage is located in the Susquehanna River floodway, approximately 100 yards from the river. The garage is inaccessible in the event of a flood and all Public Works vehicles and equipment stored in the garage are vulnerable to damage and/or loss in the event of flood.		
Action or Project Intended for Implementation			
Description of the Solution:	The Public Works Garage must be flood proofed and/or relocated. Proposed is a 2 phase project: First phase is to assess flood proofing alternatives and costs as well as estimated costs to relocate the garage to a site not in the floodway. Second phase is to implement either the flood proofing proposed or construct a new facility.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Is the critical facility located in the 1% annual chance flood area?	Yes ☒	No ☐	
(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 event	**Estimated Benefits (losses avoided):**	$ 2 M - $3 M
Useful Life:	35 years	**Goals Met:**	1,2,6
Estimated Cost:	$1 – 2 Million	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	2 years
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	Village borrowing, FEMA mitigation grants
Responsible Organization:	Village of Bainbridge	**Local Planning Mechanisms to be Used in Implementation if any:**	Chenango County planning board, Chenango county flood plain and building inspector
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Emergency relocation plan for rapid relocation of equipment and tools	$1000	Many dependencies: manpower needed to move equipment, tools, records. Very difficult in an emergency
	Move equipment, tools, records, to other municipal facilities.	$100K-$500K	Limited space, buildout of other sites, complicated operation logistics
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Relocate or elevate DPW garage	
Project Number:	2021-V. Bainbridge-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	Minimal life safety but could affect recovery or rebuild time
Property Protection	1	Primary storage for Village equipment; potential equip.& build. loss
Cost-Effectiveness	1	Mitigation will avoid potential loss claims for equip. & building.
Technical	1	Flood proofing may be technical challenge; new building very simple solution.
Political	1	Simple political justification – loss of equipment means loss of services.
Legal	1	Village has full control of the property involved.
Fiscal	-1	Costs would require long term debt which may not be authorized.
Environmental	1	Positive environmental benefit due to river pollution potential if gas and diesel vehicles are inundated.
Social	1	No adverse effect to any population segment or neighborhoods, or relocation of citizens required.
Administrative	0	Assessment (study) and project will require some outside expert assistance.
Multi-Hazard	0	Reduces risk to recurring flood risk
Timeline	1	Either flood proofing or relocation can be done in 2-3 year timeframe
Agency Champion	1	The entire Board and employee base are in favor of the project
Other Community Objectives	1	Relocation of the DPW facility could lead to riverside public parkland opportunity.
Total	9	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Alternate drinking water well(s)		
Project Number:	2021-V. Bainbridge-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	Well #1 one is one of the 2 wells used for drinking water and firefighting. The well is located in the 1% flood plain but is not protected from contamination or operation in the event of a flood event. (see also generator proposal for electric continuity for the wells).		
Action or Project Intended for Implementation			
Description of the Solution:	A 2 part project to assess the well house, plumbing, electric and chlorination system for possible flood proofing, and develop the engineering specs required. The assessment would also explore feasibility of a new well not in the flood plain. The second phase would implement the flood proofing or new well.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Is the critical facility located in the 1% annual chance flood area?	Yes ☒	No ☐	
(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 event	**Estimated Benefits (losses avoided):**	$150K to replace damaged equipment + decontamination costs
Useful Life:	40 years	**Goals Met:**	2,3,6
Estimated Cost:	$50K to 250K	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	5 years
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	Village bonding, EFC borrowing and grants, FEMA grants
Responsible Organization:	Village of Bainbridge	**Local Planning Mechanisms to be Used in Implementation if any:**	Chenango County planning, Chenango County Code enforcement
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Reactivate walnut street well	$10K	Well failed earlier tests; may not pass potable water use.
	Build pipeline from Sidney NY (6 miles distant)	$1-5 million	Sidney already has capacity problems; no other municipal systems within reasonable distance.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Alternate drinking water well(s)	
Project Number:	2021-V. Bainbridge-001	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Drinking and firefighting water critical to Village residents' safety
Property Protection	1	Firefighting water critical to Village residents' property protection. Flooding of well equipment is also a high cost loss.
Cost-Effectiveness	1	Costs of flood proofing or replacement low compared with potential property losses.
Technical	1	Flood proofing very feasible and long term. Replacement well is higher cost and higher risk.
Political	1	Protection of water supply has strong public rationale and support.
Legal	1	Village has complete and absolute legal authority to protect water supply.
Fiscal	-1	Funding flexibility does not currently exist; borrowing and/or grants will be required.
Environmental	1	No negative environment impact. Reduction of environment risk in the event a flood causes release/contamination due to chlorine release.
Social	1	Equitable access to water supply is shared by all constituents. No neighborhood disruption or relocation of lower income people is required for the project.
Administrative	-1	Additional outside expertise is required for the engineering and administrative work.
Multi-Hazard	0	Reduces the risk from flooding only.
Timeline	1	Project can be easily completed in 2-3 year timeline.
Agency Champion	1	Strong support for protecting the water supply exists on the entire board and staff.
Other Community Objectives	1	A secure and protected water system protects resident property values, and future potential economic development.
Total	9	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Emergency Power System for wells		
Project Number:	2021-V. Bainbridge-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	Two floods in the past 17 years have resulted in power system failure at the water plant.		
Action or Project Intended for Implementation			
Description of the Solution:	The Village will purchase and install an automatic emergency power source not subject to flooding.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Is the critical facility located in the 1% annual chance flood area?	Yes ☒	No ☐	
(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 event	**Estimated Benefits (losses avoided):**	Potentially lifesaving
Useful Life:	30 years	**Goals Met:**	1
Estimated Cost:	Medium	**Mitigation Action Type:**	SIP
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	6 months
Estimated Time Required for Project Implementation:	Short	**Potential Funding Sources:**	FEMA Grants/ HMA
Responsible Organization:	Village Board	**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 wells	N/A	No municipal land to relocate
	Add solar panels to well sites	$2 M	Weather dependent and will still be affected by flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Emergency Power System for wells	
Project Number:	2021-V. Bainbridge-004	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Ensures safe drinking water and access
Property Protection	0	
Cost-Effectiveness	1	Best option
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Village would need funding support to purchase power supply
Environmental	1	No environmental concerns
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	Support from Mayor
Other Community Objectives	0	
Total	10	
Priority (High/Med/Low)	High	