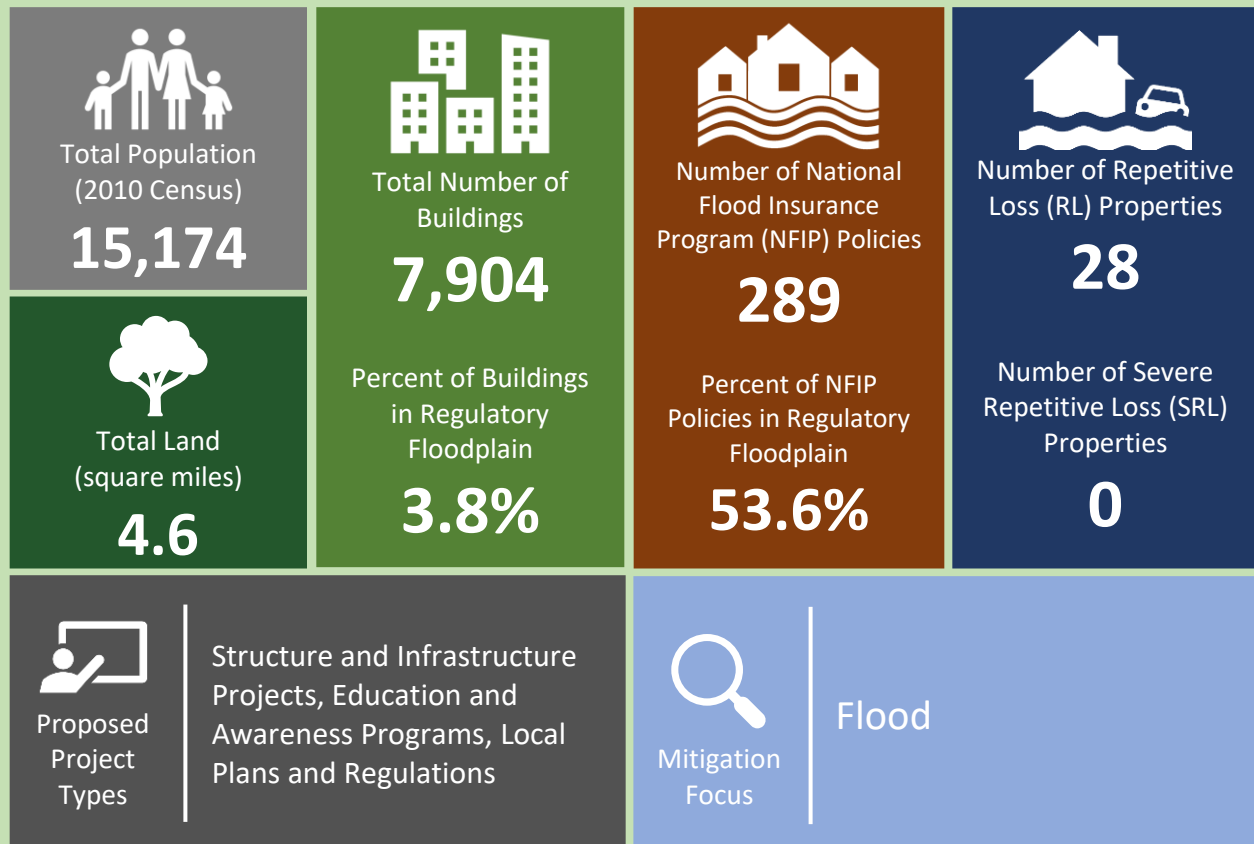




MUNICIPAL ANNEX | Village of Johnson City





9.12 Village of Johnson City

This section presents the jurisdictional annex for the Village of Johnson City. 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 in order 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 Johnson City’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.

9.12.1 Hazard Mitigation Planning Team

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

Primary Point of Contact	Alternate Point of Contact
Name: Robert A. Bennett Title: Director of Public Services Phone Number: 607-797-3031 Address: 243 Main Street, Johnson City, NY 13790 Email: jcdops@villageofjc.com	Name: Kim Cunningham Title: Deputy Clerk/ Planning & Zoning Clerk Phone Number: 607-797-9098 Address: 243 Main Street, Johnson City, NY 13790 Email: kimc@villageofjc.com
NFIP Floodplain Administrator	
Name: Daria M. Golazeski Title: Code Enforcement Phone Number: 607-786-2921 Address: 3111 E. Main Street, Endwell, NY 13760 Email: dgolazeski@townofunion.com	

9.12.2 Municipal Profile

The Village of Johnson City is in the Town of Union in Broome County, NY. For more information on the Town of Union, refer to Section 9.21. The Village of Johnson City is on the north side of the Susquehanna River and is west of Binghamton, NY. The Village of Johnson City has a total area of 4.6 square miles. The village is part of the “Triple City,” along with Endicott and Binghamton, NY. Johnson City is on the north side of the Susquehanna River and is west of Binghamton, NY. The junction of New York State Route 17 and New York State Route 201, which connects the community to the south side of the Susquehanna River, is in Johnson City. New York State Route 17C parallels NY-17.

The 2016 estimated population was 14,835, a 2.2% decrease from the 2010 Census (15,174).

Home rule is strong in New York State and thus, each town and village has its own governing body. The Village of Johnson City is governed by the Mayor and four Village Trustees.

Data from the 2016 U.S. Census American Community Survey estimates that 7.0% of the Village population is five years of age or younger, and 16.0% is 65 years of age or older.

History and Cultural Resources

The Village of Johnson City was originally incorporated in 1892 as the Village of Lestershire. In 1916 the village was renamed Johnson City after George F. Johnson, who was known for the Endicott Johnson Corporation. In 2007, residents organized a petition supporting the dissolution of the village for tax reason and in 2009 a vote



was held resulting in a “no” for dissolution of the village. Johnson City is home to Binghamton University Pharmacy School.

Growth/Development Trends

Table 9.12-1 summarizes major residential/commercial development that as of 2013 and any known or anticipated major residential/commercial development and major infrastructure development that is likely to be occur within the municipality in the next five years. Refer to the map in 9.12.9 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.12-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Parcel ID)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present					
Century Sunrise Redevelopment, LLC	Residential and Commercial	104 units	135-139 Baldwin St	Had Combined sewer system. Storm was separated from sanitary as part of project.	Completed May 2018
Binghamton University School of Pharmacy	Education	1 – 4 story building	96 Corliss Avenue	None	Completed July 2018
Known or Anticipated Development in the Next Five (5) Years					
Binghamton University School of Nursing	Education	1-4 story building	48 Corliss Avenue	None	Anticipated completion August 2019. Refurbish 4 story industrial building into an education building.
59 Lester Empire, LLC	Residential and Commercial	226 units, 60,000 sf of commercial space on 1st floor	59 Lester Avenue	Combined Sewer System causing backups during heavy rain events	Developer to work with Village to upgrade utilities including water main and sewer separation.

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

9.12.3 Hazard Event History Specific to the Village of Johnson City

Broome County has a history of natural events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The Village of Johnson City’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Broome County. Table 9.12-2 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 9.12-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Broome County Designated?	Summary of Event	Municipal Summary of Damages and Losses
October 27-	Hurricane Sandy (EM-3351)	Yes	The remnants of Hurricane Sandy moved over the area bringing high winds and precipitation	While the County was impacted, the village did not report damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	Broome County Designated?	Summary of Event	Municipal Summary of Damages and Losses
November 8, 2012				
June 26- July 10, 2013	Severe Storms and Flooding (DR-4219)	Yes	The County was impacted by a series of severe storms and flash flood events.	While the County was impacted, the Village did not report damages.
June 14, 2015	Flash Flood	No	warm front stalled across New York and northern Pennsylvania, providing the focus for repeating clusters of thunderstorms in the Finger Lakes and Southern Tier NY regions. A tropical-like airmass was in place allowing for a stripe of 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered with numerous roads and culverts destroyed by raging water.	While the County was impacted, the Village did not report damages.
March 14-15, 2015	Severe Winter Storm and Snowstorm (DR-4322)	Yes	A record snowfall of between 25 and 35 inches of snow fell. Snowfall rates reached up to 5 inches per hour especially during the onset of the storm. The Greater Binghamton Airport broke an all-time daily snowfall record with 32.4 inches and a 2-day snowfall record of 34.9 inches.	Loss of service was experienced. Roads throughout the entire Village were either closed or unpassable. Refuse collection was also delayed for two days as the village utilized Refuse Department personnel during snow removal operations.
July 23-24, 2017	Flash Flood	No	Heavy rain producing thunderstorms developed during the late afternoon and evening hours as an upper level jet stream punched into the area. Widespread thunderstorms produced swaths of 3 to 4 inches of rain in just a few hours' time during the late evening and overnight hours. Rapid rises of area streams and creeks resulted in severe flash flooding.	While the County was impacted, the village did not report damages.
August 2018	Severe Storms and Flooding (DR-4397)	Yes	A slow-moving storm tracked north from New Jersey to northern New York. This system triggered several rounds of heavy rain producing thunderstorms which caused severe flash flooding and major damages in several locations.	While the County was impacted, the village did not report damages.

Notes:

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

9.12.4 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. This section provides a summary of exposure and impacts from significant hazards of concern as identified by the Village of Johnson City. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.





Hazard Risk Ranking

This section includes 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 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 town or village may have differing degrees of risk exposure and vulnerability compared to Broome County 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 Johnson City. The Village of Johnson City 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 indicated the following:

- The Village noted that although invasive species should be ranked as a low hazard, the village has been impacted by Japanese knotweed.
- The Village changed drought from a medium to a low hazard.
- The Village changed wildfire from a low to a medium hazard.

Table 9.12-3. Village of Johnson City Municipal Hazard Ranking Input

HAZARD	Drought	Earthquake	Extreme Temperature	Flood	Invasive Species	Severe Storm	Severe Winter Storm	Wildfire
RELATIVE RISK FACTOR	Low	Low	Medium	High	Low	Medium	Medium	Medium

Notes: The scale is based on the following hazard rankings as established in Section 5.3.
 High = Total hazard priority risk ranking score of 5 and above
 Medium = Total hazard priority risk ranking of 3.9 – 4.9
 Low = Total hazard risk ranking below 3.8

Critical Facilities Flood Risk

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 event, 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 9.12-4. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
Speedway 7656	Hazardous Materials	X	X	-	-	-
WELL #6, BURNS STREET	Potable Well		X	-	-	-
WELL #7, NORTH BROAD ST.	Potable Well		X	-	-	-
Oakdale Road Pump Station	WW Pump	X	X	-	-	V. Johnson City-4
Superior	EMS	X	X	-	-	V. Johnson City-5
Village of Johnson City	DPW		X	-	-	-
Petco	Pet Store	X	X	-	0	-
Davis Bible College	Shelter (RC)	X	X	0	0	V. Johnson City-6
Camden Street Water Facility Wells 2 and 3	Potable Well	X	X			V. Johnson City-3

Source: Hazus 4.2

The Village of Johnson City reviewed the list of critical facilities and determined that hazardous material facilities and pet stores were not critical for the purpose of essential services. As a result, the Village of Johnson City did not develop mitigation actions to protect those facilities to the 500-year flood level.

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- The Johnson City DPW facility is located on a dead-end street and is in a flood prone area and has not been rebuilt to resist future flooding. A feasibility study has been completed (October 2018) to relocate the facility. Primary recommendation was to rebuild offsite outside of flood zone. Secondary was to floodproof the facility.
- The Camden Street Water Facility has Wells 2 and 3 on site. The facility is protected with a levee, but the levee has been overtopped in two recent flooding events.
- There are approximately 48 dead end streets in the village that may experience evacuation issues during a hazard event. However, due in part to BC Emergency Services and Johnson City DPW preparation and responses no evacuation issues were experienced during FEMA 4031 & 4322 events.
- Brown Street, Carlton Street, North Hudson, North Harrison, North Baldwin, and North Broad Street in addition to streets addressed in citizen survey below.

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

- Flooding concerns in the following locations:
 - Thomas Street
 - Bernice Street
 - Grand Avenue
 - Boland Drive

Tetra Tech reviewed levee data available to integrate components of the levee accreditation process and identify ways the hazard mitigation process can help to establish a path forward for the levee accreditation process. Information was collected from a combination of the National Levee Database (NLD), FEMA Flood Mapping





Products website, NYS DEC Region 7 project details and maps website and the United States Geological Survey (USGS) StreamStats website. The findings for the Village of Johnson City showed that their levee system is non-accredited. Section 4 (County Profile) shows additional details about the levee system.

Based on this review, Tetra Tech developed a phased approach to levee certification for the Village of Johnson City. This approach allows the village to understand data gaps and what improvements that may be needed to meet FEMA levee certification criteria. Phase 1 is a data needs and engineering assessment phase that is collection of data required to perform engineering analyses to determine if the levee meets design criteria. This phase is broken down into six tasks (Appendix H [Levee Data Summary and Checklist] provides details on each of these tasks):

- Task 1 – data collection and information management
- Task 2 – levee inspection and memorandum
- Task 3 – permitting
- Task 4 – survey and mapping
- Task 5 – engineering analyses and assessment
- Task 6 – prepare FEMA levee certification data needs report

The following table presents a planning level estimate for the levee system in the Village of Johnson City, along with a fee breakdown to complete each task.

Table 9.12-5. Johnson City Levee System Phase 1 Study Estimate

Task Number	Task	Estimated Fee
1	Data Collection and Information Management	\$15,000
2	Levee Inspection and Memorandum	\$20,000
3	Permitting – 408 Process	\$45,000
4	Survey and Mapping	\$110,000
5	Engineering Analyses and Assessment	\$300,000
6	Prepare FEMA Levee Certification Data Needs Report	\$30,000
TOTAL		\$520,000

9.12.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Village of Johnson City.



Table 9.12-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Comprehensive Plan	Yes	Local	Town of Union	Through Town of Union
Capital Improvements Plan	Yes	Local	Village	Annual Budget
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	Yes	Local	Public Works	Includes Floodplain Management Plan and Stream Corridor Management Plan
Open Space Plan	Yes	Local	Town of Union	Town of Union Open Space Plan
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	Yes	County	County OEM	Comprehensive Emergency Management Plan
Emergency Operation Plan	Yes	Local	Mayor	Emergency Operation Plan
Evacuation Plan	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	Yes	Regional	BMTS	Binghamton Metropolitan Transportation Study
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes	State & Local	Town of Union	Town of Union
Zoning Ordinance	Yes	Local	Town of Union	Chapter 300 of the municipal code
Subdivision Ordinance	Yes	Local	Overseen by Town of Union	Chapter 244 of the municipal code
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Village	Chapter 156 of the municipal code
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	-	State mandated BFE+2 for all construction, both residential and non-residential
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	Yes	Local	Village Planning Board	-



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Stormwater Management Ordinance	Yes	Local	Public Works	Chapter 238 of the municipal code
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Public Works	-
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	Yes	State	NYS Department of State, Real Estate Agent	NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

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

Table 9.12-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	Through Planning Board
Economic Development Commission/Committee	Yes	Done through the County
Maintenance programs to reduce risk	Yes	Through Public Works
Mutual aid agreements	Yes	With adjoining municipalities – Dickinson and Union
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Town of Union does planning; Director of Public Services does engineering
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Town of Union does planning; Director of Public Services does engineering
Planners or engineers with an understanding of natural hazards	Yes	Town of Union does planning; Director of Public Services does engineering
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement
Surveyor(s)	No	Contracted out
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
Warning systems/services	Yes	Through Broome County Emergency Services; reverse 911



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Emergency Manager	Yes	Mayor
Grant writer(s)	Yes	-
Staff with expertise or training in benefit/cost analysis	Yes	-
Professionals trained in conducting damage assessments	No	-

Fiscal Capability

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

Table 9.12-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes – through the town
Capital improvements project funding	Yes – through annual budget
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes – sewer and water
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	Yes
Other	Yes

Community Classifications

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

Table 9.12-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	9	12/13/2018
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	5 for residential and commercial	2011
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	2	-
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Natural disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public education program/outreach (through website, social media)	Yes	Municipal website; through MS4 site; through Stormwater Mgt Plan; County through annual MS4 report	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-
Other	No	-	-

Note:

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

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

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule (<https://www.isomitigation.com/bcegs/>)
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- New York State Climate Smart Communities (<http://www.dec.ny.gov/energy/56876.html>)
- The National Weather Service Storm Ready website at <https://www.weather.gov/stormready/communities>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Village of Johnson City’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.12-10. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and regulatory capability			X
Administrative and technical capability			X
Fiscal capability		X	





Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Community political capability			X
Community resiliency capability			X
Capability to integrate mitigation into municipal processes and activities			X

National Flood Insurance Program

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

NFIP Floodplain Administrator (FPA)

Daria M. Golazeski, Code Enforcement

National Flood Insurance Program (NFIP) Summary

The Village of Johnson City maintains lists/inventories of properties that have been flood damaged, but the list does not identify property owners who are interested in mitigation. Residential structures are the primary structures damaged during flood events. The Town makes Substantial Damage estimates and has previously declared eight structures as Substantially Damaged. One property is currently interested in mitigation and one property is in the process of being mitigated through FEMA and State funding sources.

The following table summarizes the NFIP statistics for the Village of Johnson City.

Table 9.12-11. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Johnson City (V)	289	185	\$13,954,272	28	0	155

Source: FEMA 2018

Notes: Policies, claims, repetitive loss, and severe repetitive loss statistics provided by FEMA Region 2, and current as of May 31, 2018. The total number of repetitive loss properties does not include severe repetitive loss properties

RL Repetitive Loss; SRL Severe Repetitive Loss

Resources

The FPA is responsible for floodplain administration with the assistance of Village staff. The Village provides education and outreach to the public using Community Rating System (CRS) guidance on the village website. The FPA noted that they do not have access to resources to determine possible future flooding conditions from climate change and that old and outdated flood maps present barriers to running an effective floodplain management program. However, the FPA stated that they feel adequately supported and trained to fulfill their responsibilities as the municipal floodplain administrator. The FPA would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

The Village of Johnson City is assisting in the update of flood plain (FIRM) maps at the Jurisdictional Level. Specific assistance is being provided by attending map update meetings held by FEMA, NYSDEC, and USGS; and by identifying flood-prone areas outside of currently designated flood areas.



Compliance History

The Village of Johnson City is in good standing in the NFIP. The most recent compliance audit [e.g. Community Assistance Visit (CAV)] took place in August of 2018. The Village of Johnson City continues to participate in the National Flood Insurance Program (NFIP) and the Community Rating System. The Village maintains compliance with and good-standing in the NFIP through adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.

Regulatory

Flood Damage Prevention Ordinance: The Village of Johnston City Flood Damage Prevention Ordinance (Chapter 156 of the municipal code) was adopted to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- 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;
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging and other development which may increase erosion or flood damages;
- Regulate the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards to other lands; and
- Qualify for and maintain participation in the National Flood Insurance Program.

The Ordinance aims:

- To protect human life and health;
- To minimize expenditure of public money for costly flood control projects;
- To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- To minimize prolonged business interruptions;
- To minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone, and sewer lines, streets and bridges located in areas of special flood hazard;
- To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- To provide that developers are notified that property is in an area of special flood hazard; and,
- To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

The FPA noted that site plan reviews support floodplain management and the meeting of NFIP requirements. The Village is a member of the Community Rating System (CRS) program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures, which is also indicated below.



Planning

Existing Integration

Plan Updates: The Village continues to support and provide input to the Town of Union town-wide plans and studies to further characterize flooding issues including:

- Townwide Comprehensive Long-Term Recovery Plan
- Townwide Comprehensive Drainage Plan
- Townwide Floodplain Management Plan and Ordinance
- Townwide Comprehensive Sewer Infiltration Study
- Townwide Floodproofing Analysis

Town of Union Comprehensive Plan: The Village of Johnson City has a Master/Comprehensive Plan. It is included in the Town of Union Unified Comprehensive Plan.

Stormwater Management Plan: The Village of Johnson City is an MS4 Regulated Community and has a formal Stormwater Management Plan. The Plan specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.

Broome County Hazard Mitigation Plan: The Village of Johnson City continues to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.

Comprehensive Emergency Management Plan: The Village has a Comprehensive Emergency Management Plan. The Plan does not refer to the Hazard Mitigation Plan. The Village completes ongoing updates of Comprehensive Emergency Management Plan.

NYRCR Broome (March 2014): The Village of Johnson City was included in the NY Rising Community Reconstruction Program (NYRCR) Plan for Broome County. The plan presented projects to increase resiliency in future flood events. During the HMP planning process, the village reviewed the list of projects included in the NYRCR Plan and identified projects they have completed (see Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy) and are currently working on (see below). Projects not yet started are included in Table 9.12-13.

- Separate storm sewer lines from the sanitary sewer system to eliminate flooding at the intersection of Grand Avenue and Burbank
- Upgrading the existing water plant complex to enhance resiliency
- Completed a feasibility study of the DPW complex
- Upgraded the sanitary sewer pump station

Opportunities for Future Integration

Updates to planning documents can include references to the Countywide Hazard Mitigation Plan.

Regulatory and Enforcement (Ordinances)

Existing Integration

Zoning Ordinance: The comprehensive Zoning Ordinance for the Town of Union and the Villages of Johnson City and Endicott (Chapter 300 of the municipal code) was adopted to promote and protect the public health, safety and general welfare and provide for solar access. The Zoning Ordinance implements the goals and objectives of the 2008 Unified Comprehensive Plan, which include:



- Providing a wide variety of living environments for all socioeconomic groups in the population and a diversity of housing densities and types, ranging from rural low density to urban high density.
- Providing a sound commercial base, offering convenience, choice and a wide variety of goods and services.
- Improving the economy by promoting new and expanded industrial enterprises, retaining existing enterprises and redeveloping existing industrial facilities in order to further diversify the economic base and to provide for increased employment on a permanent basis.
- Providing a transportation network which is capable of moving people and goods efficiently and safely.
- Maintaining the infrastructure at a level needed to continue adequate services to Town and Village residents.
- Enriching the lives of all citizens by striving to improve the quality of the environment.
- Accommodating solar energy systems, equipment and access to sunlight.

Subdivision of Land Ordinance: The Village of Johnson City Subdivision of Land Ordinance (Chapter 244 of the municipal code) establishes subdivision regulations and the responsibilities of the Planning Board and Village Board.

Stormwater Management and Erosion and Sediment Control Ordinance: The Stormwater Management and Erosion and Sediment Control ordinance (Chapter 238 of the municipal code) established minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction. This chapter seeks to meet those purposes by achieving the following objectives:

- Meet the requirements of Minimum Measures 4 and 5 of the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised;
- Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01, or as amended or revised;
- Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels;
- Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;
- Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

Parking Ordinance: The Village of Johnson City maintains and enforces a parking ordinance for emergency snow removal.

The municipal zoning, subdivision regulations, and site plan review process for the Village of Johnson City consider natural hazard risk and require developers to take additional actions to mitigate natural hazard risk.



Operational and Administration

Existing Integration

Planning Board: The Planning Board is an independent body comprised of five members appointed by the Mayor. Each member serves a five-year term, with one member's term expiring each calendar year. There are no term limits for Planning Board members. The Planning Board reviews site plans for building construction, additions, rehabilitations, land partitions, change of building use, change of building tenants, and sub-divisions to ensure that the plans comply with the code and law.

If the site plans are approved, a building permit can be issued to a developer. If the zoning ordinance cannot be complied with, the applicant is directed to the Zoning Board of Appeals. Working in conjunction with the Village Board and/or Zoning Board of Appeals, some projects may have Public Hearings scheduled by the appropriate body, giving neighbors and Village residents an opportunity to comment on the proposal.

Meetings are held on the 4th Tuesday of the month at 7:30pm in the second-floor board room at Village Hall, 243 Main St., with a work session at 7:00pm. Meetings are subject to change from the published schedule due to holidays or the Board's agenda.

Zoning Board of Appeals: The Zoning Board of Appeals is a five (5) Member "Quasi-Judicial" Board comprised of Village of Johnson City residents appointed by the Mayor. Each member serves a five-year term, with one member's term expiring each calendar year. It is the function of the Board of Appeals to give applicants permission to do something contrary to the Zoning Regulations, provided the Applicant provides sufficient evidence to justify the variance. The Board of Appeals has the legal power to issue area and use variances, and resolve issues concerning disagreements with the decision of the Building Inspector. The Zoning Board also "interprets" the meaning of the Zoning Ordinance.

Meetings are held on the 2nd Monday of the month at 7:30pm in the second-floor board room at Village Hall, 243 Main St, with a work session at 7:00pm. Meetings are subject to change from the published schedule due to holidays or the Board's agenda.

Structural Flood Control Evaluation: The Village is investigating the levy surrounding the Water Plant to determine if it could be raised.

National Incident Management System (NIMS): The Village conducts training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).

Vegetation Management: The Village of Johnson City continues to maintain programs to keep trees from threatening lives, property, and public infrastructure during storm events.

Stormwater Data Digitization: The Village of Johnson City is converting their stormwater outfall mapping to GIS formats.

Critical Facility Flood Insurance: The Village of Johnson City maintains flood insurance for the Public Works Garage and Water Department, which is located in the floodplain.

Non-Structural Flood Mitigation: The Village is considering non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as repetitive loss properties, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners. 37 River Terrace and other repetitive loss properties are being specifically considered.



Retrofitting/Removal of Structures from Hazard Prone Areas: Where appropriate, the Village of Johnson City supports the retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. The Village works to identify facilities that are viable candidates for each strategy based on cost-effectiveness. Implementation of these actions are based on available funding.

Archive Elevation Certificates: The Village will continue to obtain and archive elevation certificates.

Mutual Aid Agreements: The Village is creating, enhancing, and maintaining Mutual Aid agreements with neighboring communities for continuity of operations.

Post-Disaster Procedures: The Village is identifying and developing agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping.

Damage Assessment Training: The Village of Johnson City works with regional agencies (i.e. County and SOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).

Structure/Facility Inventories/Datasets: The Village of Johnson City participates in regional, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including:

- Support the performance of enhanced risk and vulnerability assessments for hazards including flooding, earthquake, wind, and land failure.
- Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use.

The Village has a municipal planner/contract planning firm. Stormwater Management functions are performed by Robert A. Bennett, Director of Public Services. NFIP administration services are performed by Daria M. Golazeski, Town of Union Deputy Commissioner of Codes & Ordinances. The Village does not have staff or contract with firms that have experience with developing Benefit-Cost Analysis. The Village has staff/contracts with firms who can perform Substantial Damage Estimates and have experience in preparing grant applications for mitigation projects. Village staff receive training/continuing professional education with supports natural hazard risk reduction. No Village staff currently have job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazard risk. The Building Code officials participate in associations, organizations, and other groups that support natural hazard risk reductions and build hazard management capabilities.

Opportunities for Future Integration

The Village could hire staff or contract with firms that have experience with developing Benefit-Cost Analysis. The Village could include job descriptions pertaining to hazard management and mitigation for certain staff.

Funding

Existing Integration

The municipal/operating budget does not have a specific mitigation project line but is accomplished within capital improvement/infrastructure upgrade projects. The Villages Capital Improvements Budget includes



budget for capital improvement/infrastructure upgrade projects. The Village has been awarded the grant funds for the following projects:

- Reynolds Road/Anna Maria Ditch Rehabilitation Project, NYS GOSR
- Water Treatment Plant Resiliency Project, NYS GOSR
- Grand Avenue & Interceptor 'B' sewer separation project, TOU-CDBG-DR funds
- Water Department Maintenance and Storage Building Replacement Projects, NYS GOSR & TOU-CDBG-DR funds

Opportunities for Future Integration

The Village could continue to allocate municipal budget and capital improvements budget funding for hazard mitigation projects and support these funds by applying for grant assistance.

Education and Outreach

Existing Integration

The Village of Johnson City operates a municipal webpage (<http://www.villageofjc.com/>) that has community news and information. The webpage includes a flood protection information page which has various educational information on flooding, flood insurance, and flood protection. The Village of Johnson City provides flooding information to residents in high-risk areas: Pamphlets continue to be mailed to residents in flood prone areas affected by the Susquehanna River, Nanticoke Creek, and Little Choconut Creek. Each pamphlet is tailored in terms of the type of flood warning that residents of each area must be aware of. These pamphlets are periodically reviewed and updated to provide the most current data possible.

The Village of Johnson City conducts and facilitates community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:

- Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.
- Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.
- Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.
- Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.

Opportunities for Future Integration

The Village could make information available about other hazards besides flooding on the municipal website. The Village could hire a full-time employee to perform these tasks.

Sheltering, Evacuation, and Temporary Housing

Temporary housing, evacuation routes, and sheltering measures must 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.

Refer to Section 4.6.5 of Volume 1 of this plan for a description of resources identified by the county to support municipalities with the identification of evacuation, sheltering, and temporary and permanent housing.



Temporary and Permanent Housing

The Village of Johnson City has not identified potential sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating houses of the floodplain and/or building new homes once properties in the floodplain are acquired.

Evacuation and Sheltering Needs

The Village of Johnson City identified the following facilities as potential sheltering locations for residents. As for evacuations, the village follows what the county issues to the village.

- Johnson City High School
- Nursing homes have been used as standby shelters
- Wilson Hospital

9.12.6 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 2013 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 9.12-12. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
1.	Continue to participate in FEMA Buyout Program: Currently there are nine (9) properties that have submitted for acquisition: 29 River Terrace, 33 River Terrace, 83 Olive Street, 91 Olive Street, 16 N. Harrison Street, 28 N. Harrison Street, 52 N. Harrison Street, 16 N. Baldwin Street, 72 N. Hudson Street.	Flood		Village of Johnson City Mayor's Office	Complete	Cost		1. Include in 2019 HMP 37 River Terrace - Complete 33 River Terrace 83 Olive Street 91 Olive Street 72 N Hudson Street 2. 16 N Harrison Street 52 N Harrison Street - Complete 16 N Baldwin Street - In Progress 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
2.	DPW facility – rebuild the DPW offices onto a second floor at the existing site.	Flood		Village DPW	In Progress	Cost		1. Include in 2019 HMP NY Rising paid for a feasibility study that has been completed; 3.
						Level of Protection		
						Damages Avoided; Evidence of Success		
3.	Water Department facility projects – construct a new building for the offices, SCADA equipment, meter room and employee locker room within the existing complex at an elevation six (6) feet above the existing floor elevation; wet proofing the three well houses located on site; raising and replacing backup generator.	Flood		Village Water Department	Complete	Cost	\$307,500	1. Discontinue 2. 3. Elevated SCADA equipment three feet above flood of record (administration building) Water department maintenance building is in progress
						Level of Protection	500-year	
						Damages Avoided; Evidence of Success		
4.	Rehabilitation project at unnamed drainage ditch between Reynolds Road and Anna Maria Drive	Flood		USACE, Village DPW	Completed	Cost	\$1,000,000	1. Discontinue 2. 3. Complete
						Level of Protection	25-year	
						Damages Avoided;	Reducing erosion and	



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success	increased the capacity of Broome County's finch hollow site #1	
5.	Explore stormwater retention project at the Johnson City District School property located at 25 N. Hudson Street. This site contains 9.03 Acres of land that currently has the School's football field and associated storage and maintenance buildings located on it.	Flood		Village Mayor's Office, Town of Union	No Progress	Cost		1. Discontinue 2. 3. Not a feasible project at the time of this plan update
6.	Support and provide input to the Town of Union town-wide plans and studies to further characterize flooding issues including: -Town wide Comprehensive Long-Term Recovery Plan -Town wide Comprehensive Drainage Plan -Town wide Floodplain Management Plan and Ordinance -Town wide Comprehensive Sewer Infiltration Study -Town wide Floodproofing Analysis	Flood		Town of Union, Village Mayor's Office	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
7.		Flood		Village	Completed	Cost		1. Discontinue



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Level of Protection	Cost	
	Wet proofing of the village's water supply wells (#5, #6, #7) that are off-site from the main Water Plant.			DPW		Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
8.	Install storm water pump station at the Water Plant.	Flood		Village DPW	No Progress	Cost		1. Include in 2018 Plan
						Level of Protection		2. Plant is on the backside of the levee and it overtops; would benefit the system as it would keep it running
						Damages Avoided; Evidence of Success		3.
9.	Investigate the levy surrounding the Water Plant to determine if it could be raised.	Flood		Village Mayor's Office	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
10.	Install backup power supply (generator) at the Town of Union Water Booster Station located on Fairview Street, Johnson City, which is utilized to supply water to the Broome County Landfill and Airport.	All		Village Mayor's Office, Broome County	Complete	Cost	\$795,000	1. Discontinue
						Level of Protection		2. Back-up generators installed at various locations Wells #6/#7, Fairview Street/ Reynolds Road Booster Stations, North and Southside Fire (2009-2012)
						Damages Avoided; Evidence of Success		3. Complete
11.	Continue training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).	All		Village Mayor's Office FEMA	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
12.	Develop and implement or maintain and enhance programs to keep trees	Severe Storm		Village DPW NYSEG	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	from threatening lives, property, and public infrastructure during storm events.					Damages Avoided; Evidence of Success		3. Ongoing capability
13.	Retrofit vulnerable critical facilities, including the Wren Street water pump booster station, to include backup and redundant power sources to maintain facility operations during hazard events for which they are exposed.	Flood		Village Mayor's Office and Planning	Complete	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Complete
14.	Assist in the update of flood plain (FIRM) maps – Jurisdictional Level. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC and USGS; and identification of flood-prone areas outside of currently designated areas	Flood		FEMA, Village Mayor's Office	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
15.	Convert stormwater outfall mapping to GIS format.	Flood		Village Planning	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
16.	Continue participation in the National Flood Insurance Program (NFIP).	Flood		Village Mayor's Office and TOU	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
17.		Flood		Village		Cost		1. Discontinue



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Continue participation in the CRS.			Mayor's Office	Ongoing Capability	Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
18.	Maintain flood insurance for Public Works Garage and Water Department in the floodplain.	Flood		Village DPW	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
19.	Maintain and enforce a parking ordinance for emergency snow removal.	Severe Storm		Village Police Dept.	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
20.	Consider non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including 37 River Terrace and other properties that have experienced repetitive losses, such as acquisition/relocation, or elevation depending on feasibility. The parameters for feasibility for this initiative would be: funding, benefits versus costs and willing participation of property owners.	Flood, Severe Storm		Village Floodplain Administrator	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability
21.	Provide flooding information to residents in high-risk areas:	Flood		Town of Union Planning Department;	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Pamphlets will continue to be mailed to residents in flood prone areas affected by the Susquehanna River, Nanticoke Creek, and Little Choconut Creek. Each pamphlet is tailored in terms of the type of flood warning that residents of each area must be aware of. These pamphlets shall be periodically reviewed and updated to provide the most current data possible.			Villages of Endicott and Johnson City		Damages Avoided; Evidence of Success		3. Ongoing capability
22.	Taft Avenue Sewer upgrades. In September of 2011, many businesses suffered structural and /or damage to essential capital components of their buildings due to flooding, especially in portions of the Village of Johnson City and the Westover, Main Street Endwell, and West Corners business districts. Several property owners have reported that their homes were subject to the back flow of sewer water into their homes during the September 2011 flood event.	Flood		Village P&CD; DPW	No Progress	Damages Avoided; Evidence of Success	Cost Level of Protection	1. Discontinue 2. 3. The Village is not tied into this sewer system; therefore, this action will be removed from the village's mitigation strategy.
23.	Provide funding to supplement a grant from New York State to	Flood		Village P&CD; DPW	No Progress	Damages Avoided; Evidence of Success	Cost Level of Protection	1. Discontinue 2.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps						
	prepare a Long-Term Community Recovery Plan for the Town of Union, including the Villages of Endicott and Johnson City. The purpose of the Long-Term Community Recovery Plan is to provide a much more in-depth analysis of the impacts of the September 2011 flood event on the Village's housing and commercial industrial inventory and markets. The plan will also identify potential adaptive re-uses of properties and investigate potential funding sources for catalytic redevelopment activities.					Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> Project to be included in 2019 HMP or Discontinue If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why. <p>3. This action is done through Broome County; therefore, this action will be removed from the village's mitigation strategy.</p>						
24.	Provide funds to update the Town's Floodplain Management Plan and incorporate the Villages of Endicott and Johnson City into the new plan. Neither of the two villages currently have plans. The floodplain development ordinance will also be revised as part of this project. The flood event of September 2011 impacted several areas throughout the Town that have not historically been flooded and are not currently addressed in the Town's Floodplain Management Plan. The	Flood		Village P&CD; DPW	In Progress	<table border="1"> <tr> <td>Cost</td> <td></td> </tr> <tr> <td>Level of Protection</td> <td></td> </tr> <tr> <td>Damages Avoided; Evidence of Success</td> <td></td> </tr> </table>	Cost		Level of Protection		Damages Avoided; Evidence of Success			<ol style="list-style-type: none"> Include in 2019 HMP
Cost														
Level of Protection														
Damages Avoided; Evidence of Success														



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	new plan will also make recommendations for improving the Town's Floodplain Development Ordinance.							
Flood-1	<p>Purchase, relocate, or elevate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.</p> <p>Phase 1: Identify appropriate candidates based on cost-effectiveness versus retrofitting.</p> <p>Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.</p>	Flood		Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from BCPD, NYSOEM, FEMA	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
Flood-2	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.	Flood		Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NYSOEM, FEMA	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives below.							
Flood-3	<p>Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:</p> <ul style="list-style-type: none"> Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. Use email notification systems and newsletters to better educate the public on flood insurance, the 	Flood		Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	Ongoing Capability	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided; Evidence of Success		3. Ongoing capability



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.							
Flood-4	Obtain and archive elevation certificates	Flood		NFIP Floodplain Administrator	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
Flood-5	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	Flood		Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	Ongoing Capability	Level of Protection		1. Discontinue 2. 3. Ongoing capability
Flood-6	Complete ongoing updates of Comprehensive Emergency Management Plans	Flood		Municipality with support from NYSOEM	Ongoing Capability	Damages Avoided; Evidence of Success		1. Discontinue 2. 3. Ongoing capability
Flood-7	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	All Hazards		Municipality with support from County, NYSOEM, FEMA and surrounding communities	Ongoing Capability	Cost		1. Discontinue 2. 3. Ongoing capability
Flood-8		Flood				Level of Protection		1. Discontinue
						Damages Avoided; Evidence of Success		
						Cost		1. Discontinue



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
	Identify and develop agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping			Municipality with support from County, NYSOEM and FEMA	Ongoing Capability	Level of Protection		<ol style="list-style-type: none"> Project to be included in 2019 HMP or Discontinue If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why.
						Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> Ongoing capability
Flood-9	Work with regional agencies (i.e. County and SOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	Flood		Municipality with support from County, NYSOEM and FEMA	Ongoing Capability	Cost		<ol style="list-style-type: none"> Discontinue Ongoing capability
						Level of Protection		<ol style="list-style-type: none"> Ongoing capability
						Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> Ongoing capability
Flood-10	Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency	Flood		Hazard Mitigation Plan Coordinator	Ongoing Capability	Cost		<ol style="list-style-type: none"> Discontinue Ongoing capability
						Level of Protection		<ol style="list-style-type: none"> Ongoing capability
						Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> Ongoing capability



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	<p>management purposes including:</p> <ul style="list-style-type: none"> Support the performance of enhanced risk and vulnerability assessments for hazards of concern. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. <p>Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level.</p>							
Severe Storm-1	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready"	Severe Storm		Municipality with support from County, NYSOEM and FEMA	Discontinue	Cost		1. Discontinue
						Level of Protection		2.
						Damages Avoided;		3. Not a concern for the village at this time



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success		
	program and supporting communities in joining the program. "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24-hour Warning Point, increase number of ways EOC receives NWS warnings, increase number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, train weather spotters, create a formal hazardous weather plan, host annual visits by NWS to communities, etc.							
Earthquake-1	Obtain training and conduct rapid screening assessment of critical	Earthquake		Municipal Emergency Management,	No Progress	Cost		1. Discontinue 2. -
						Level of Protection		



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps
	facilities for earthquake vulnerability.			Fire, PD with support from County, NYSOEM		Damages Avoided; Evidence of Success		<ol style="list-style-type: none"> Project to be included in 2019 HMP or Discontinue If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). If discontinue, explain why.
Earthquake-2	Develop a post-earthquake management plan to address building safety inspections, gas leaks, and other elements to protect public safety.	Earthquake		Municipal Emergency Management, Fire, PD with support from County, NYSOEM	No Progress	Cost		<ol style="list-style-type: none"> Discontinue - Earthquake is not a high hazard of concern for the village; therefore, this action will not be included in the village's mitigation strategy.
						Level of Protection		
						Damages Avoided; Evidence of Success		



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Johnson City has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- The Village of Johnson City was included in the NY Rising Community Reconstruction Program (NYRCR) plan for Broome County in March 2014. During the NY Rising process, the village identified mitigation projects that would make the village more resilient to future storms. During the plan update process, the village identified the following completed projects:
 - Rehabilitation of the Anna Maria ditch stormwater system – completed in 2016
 - Administration phase of the upgrade of the existing water plant complex
- **Building Resiliency (2016):** The Broome County Department of Planning prepared *Building Resiliency* to document resiliency projects municipalities have completed. The Village of Johnson City identified the following completed projects (as of 2016):
 - Five property acquisitions on River Terrace, Olive Street, and North Hudson Street
 - Three property acquisitions on North Harrison and North Baldwin Streets
 - One property elevation on Grand Avenue
 - Completed improvements to the Brown Street sanitary pump station which included upgrades to the power supply, operational equipment and physical structure, and access to the structure was improved as well
 - In 2013, Supervisory Control and Data Acquisition (SCADA) equipment, used for monitoring and control purposes, was elevated above record-setting flood levels at the Combined Sewer Operations (CSO) facility.
 - In 2012, the village lined a roadside ditch with riprap, installed a larger culvert and discharge pipe to increase flow capacity and minimize erosion on Deyo Hill Road.
- Grand Avenue and Interceptor 'B' sanitary/storm sewer separation project. Project began in May 2018 and is anticipated to be completed in October 2018. The project will separate approximately 37 Acres of storm water runoff from the sanitary sewer system. Project is 90% complete as of November 2018. and will continue based upon available funding.
- Install Backup Generator at Johnson City Village Hall. Anticipated to be completed during 2019.
- Since 2011, the Administration and Operations Center was raised 3 feet above the flood of record.
- Well houses in the village were floodproofed in 2014-2015.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Johnson City participated in a mitigation action workshop on October 17, 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.12-13 summarizes the comprehensive-range of specific mitigation initiatives the Village of Johnson City 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 9.12-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.12-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. Johnson City-1 (former 1)	Continue to participate in FEMA Buyout Program.	<p>Problem: Properties are in high risk zone.</p> <p>Solution: Currently properties that have submitted for acquisition: 29 River Terrace, 28 N. Harrison Street. 16 N Baldwin Street.</p>	Flood	1	No	None	Village of Johnson City Mayor's Office	Dependent on number of properties, cost per property.	FEMA HMGP or FMA with homeowner local match	Within 6 months.	FMA, PDM, HMGP	Medium	LPR, SIP	PP
V. Johnson City-2 (former 2)	DPW Complex Resiliency Improvements	<p>Problem: During Tropical Storm Lee, the Village of Johnson City's DPW complex was inundated, severely damaging equipment and forcing the staff to relocate to inadequate, temporary facilities at Village Hall. During extreme weather events, DPW employees often work long shifts and require use of the facility locker room to rest before going back out. The current space at Village Hall is inadequate.</p> <p>Solution: Relocate the DPW's administration offices and employee locker room to a second-story that would be located above the base flood elevation. The project also would construct a new 3,000 square-foot maintenance building and a 13,041 square-foot garage for the village's vehicles.</p>	Flood, Severe Storm	1	Yes	None	Village DPW	Rebuild at existing site \$10.8 million or relocate to 33 Grand Avenue \$8.3 million.	Protects DPW administrative offices and employee locker room; ensures continuity of operations	14 months	NY Rising, FEMA HMGP, CDBG, Municipal Budget	High	SIP	PP
V. Johnson City-3	Install storm water pump station at the	<p>Problem: Plant is on the backside of the levee and it overtops; would benefit the</p>	Flood	1	Yes	None	Village DPW	\$470,000	Water Plant maintains function	Within 5 years	HMGP	High	SIP	SP



Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
(former 8)	Camden Street Water Facility	system as it would keep it running Solution: Stormwater pump station will be installed at the Camden Street water Facility and protected to the 500-year flood level.							during flood events.					
V. Johnson City-4	Protect Oakdale Road Pump station to the 500-year flood level.	Problem: The Pump station is in the 100-year floodplain. Solution: The Village will floodproof the Oakdale Road pump station.	Flood	1, 3, 5	Yes ♦	None	Village Facilities manager, Town of Union	\$25,000	Pump station protected to the 500-year flood level	Within 1 year based on funding	HMGP	High	SIP	PP
V. Johnson City-5	Protect the Superior EMS Station to the 500-year flood level.	Problem: The EMS Station is in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate themselves. Solution: The Village will contact the facility manager to notify them of their status within the 100-year floodplain and provide potential mitigation actions.	Flood	1, 2, 3, 5	Yes ♦	None	Village Floodplain Administrator working with facility operators / owners	<\$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Within 6 months	Municipal budget	Medium	EAP	PI
V. Johnson City-6	Protect the Blessed Sacrament School/Davis Bible College to the 500-year flood level.	Problem: The School is a shelter and is in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate themselves. Solution: The Village will contact the facility manager to notify them of their status within the 100-year floodplain and provide potential mitigation actions.	Flood	1, 2, 3, 5	Yes ♦	None	Village Floodplain Administrator working with facility operators / owners	<\$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Within 6 months	Municipal budget	Medium	EAP	PI
V. Johnson City-7	Update the Town's Floodplain Management Plan and	Problem: The flood event of September 2011 impacted several areas throughout the Town that have not historically been	Flood	1, 3	No	No	Village P&CD; DPW	\$25,000	Flood Development Ordinance updated.	Within 1 year	CDBG	High	LPR	PR



Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
	incorporate the Villages of Endicott and Johnson City into the new plan.	<p>flooded and are not currently addressed in the Town's Floodplain Management Plan. The Village of Johnson City does not have a Floodplain Management Plan.</p> <p>Solution: The floodplain development ordinance will also be revised as part of this project. The new plan will also make recommendations for improving the Town's Floodplain Development Ordinance.</p>												
V. Johnson City-8	Oakdale Mall Rehabilitation	<p>Problem: Oakdale Mall is an older commercial property in need of improvements. The mall is susceptible to damages during flooding and severe storm events.</p> <p>Solution: This project presents a long-term, visionary concept of how the Oakdale Mall could be retrofitted with green infrastructure techniques and best management practices for stormwater management. The mall building's flat roof would be modified to a green roof to retain and slow stormwater during rain events, reduce the burden on the stormwater system, and reduce energy costs by absorbing heat. A second alternative would use solar technology on the roof to reduce energy consumption</p>	Flood, Severe Storm	1, 3, 5	No	None	Village Engineer, Village Board	\$1.93 million	Increase the holding capacity of stormwater retention facility to reduce flood and erosion risks	1 year	NY Rising, CDBG, FEMA HMGP, Municipal Budget	Medium	SIP, NSP	PP, NR



Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		from the power grid and may offset a percentage of the building's retrofit costs. Portions of the parking area surrounding the mall would be reconstructed and re-graded to redirect stormwater into rain gardens and bio-swales. These features would promote infiltration, improve water quality, and reduce runoff. The large, underutilized asphalt parking lots would be replaced by with grass parking surface.												
V. Johnson City-9	Cloverleaf Bio-Retention / Flood Mitigation	<p>Problem: In the Town of Union, a portion of Little Choconut Creek flows between the Route 201 and Route 17 cloverleaf interchange and the commercial site formerly occupied by the Gander Mountain sporting goods store. During Tropical Storm Lee, the creek flash flooded. This flooding inundated the Gander Mountain site and caused significant damage to the store's inventory. Ultimately, the store closed which negatively affected the Town's commercial tax base</p> <p>Solution: This project presents a long-term, visionary design for bio-retention measures that would expand the floodplain of Little Choconut Creek using</p>	Flood, Severe Storm	1, 5	No	None	Town of Union Engineer and Village of Johnson City Engineer	\$129,000	Increased holding capacity will reduce flood risk to surrounding properties	1 year	NY Rising, CDBG, FEMA HMGP, Municipal Budget	Medium	SIP, NSP	PP, NR



Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		undeveloped and underutilized land. The pockets of land within the adjacent cloverleaf interchange of Route 201 and Route 17 would provide a series of inter-connected bio-retention areas to expand the creek's floodplain and provide additional flood storage												
V. Johnson City-10	Finch Hollow County Retention Facility #1	<p>Problem: During periods of heavy rain and flooding, sediment accumulates, reducing the capacity of the Finch Hollow County Retention Facility #1</p> <p>Solution: Remove accumulated sediment that affects capacity of stormwater retention facility</p>	Flood, Severe Storm	1, 5	No	None	Village Sewer Department and Engineer, Broome County	\$65,000	Reduce or eliminate sediment; increase water quality	1 year	NY Rising, CDBG, FEMA HMGP and PDM, Municipal Budget	Medium	SIP	PP
V. Johnson City-11	Helen Drive Sewer Separation	<p>Problem: The stormwater and sanitary sewer lines are currently not separate. During heavy rain and flood events, this can lead to an increase in water and flooding along Helen Drive.</p> <p>Solution: Separate stormwater lines from the sanitary sewer system to eliminate flooding of Helen Drive. The Village will also undertake water line improvements, curbing, and new pavement.</p>	Flood, Severe Storm	1, 5	No	None	Village Sewer Department and Engineer	\$600,000	Increase capacity of sewer lines; reduce/eliminate flooding in this area of the village	1 year	NY Rising, CDBG, FEMA HMGP and PDM, Municipal Budget	Medium	SIP	PP
V. Johnson City-12	Stormwater Detention	<p>Problem: The Johnson City School District property and Village park at 25 N. Hudson Street does not have the capacity to limit water runoff which causes significant damage to the</p>	Flood, Severe Storm	1, 5	No	None	Village Sewer Department and Engineer	\$35,000	Reduce flooding, protect fields	1 year	NY Rising, CDBG, FEMA HMGP and PDM,	Medium	SIP	PP



Project Number	Project Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Critical Facility (Yes/No)	Environmental and Historic Preservation (EHP) Issues	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Estimated Timeline	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		<p>school's football field, storage facilities, and maintenance buildings. Repeated heavy rainfall or flood events may cause significant damage both to facilities and the land on this property.</p> <p>Solution: Install underground stormwater storage units at Johnson City School District athletic fields and Village park.</p>									Municipal Budget			

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
- 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

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.

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 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 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

Critical Facility:


- Yes  - Critical Facility located in 1% floodplain



Table 9.12-14. 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 Objectives	Total	High / Medium / Low
V. Johnson City-1 (former 1)	Continue to participate in FEMA Buyout Program.	0	1	1	1	0	1	0	1	0	1	0	0	1	1	8	Medium
V. Johnson City-2 (former 2)	DPW Complex Resiliency Improvements	0	1	0	1	1	1	0	1	1	1	1	1	1	1	11	High
V. Johnson City-3 (former 8)	Install storm water pump station at the Camden Street Water Facility	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
V. Johnson City-4	Protect Oakdale Road Pump station to the 500-year flood level.	0	1	1	0	1	1	0	1	1	0	1	0	0	1	8	Medium
V. Johnson City-5	Protect the Superior EMS Station to the 500-year flood level.	0	1	1	1	1	1	1	1	1	0	0	1	1	1	11	High
V. Johnson City-6	Protect the Blessed Sacrament School/Davis Bible College to the 500-year flood level.	0	1	0	1	1	1	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-7	Update the Town's Floodplain Management Plan and incorporate the Villages of Endicott and Johnson City into the new plan.	0	1	0	1	1	1	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-8	Oakdale Mall Rehabilitation	0	1	1	1	1	0	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-9	Cloverleaf Bio-Retention / Flood Mitigation	0	1	1	1	1	0	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-10	Finch Hollow County Retention Facility #1	0	1	1	1	1	0	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-11	Helen Drive Sewer Separation	0	1	1	1	1	0	0	1	1	0	0	0	1	1	8	Medium
V. Johnson City-12	Stormwater Detention	1	1	1	1	0	0	0	0	1	1	1	1	0	0	8	Medium

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions.





9.12.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.12.8 Staff and Local Stakeholder Involvement in Annex Development

The Village of Johnson City 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: Department of Public Services, Deputy Clerk, and Code Enforcement. The Director of Public Services and Code Enforcement represented the community on the Broome 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.

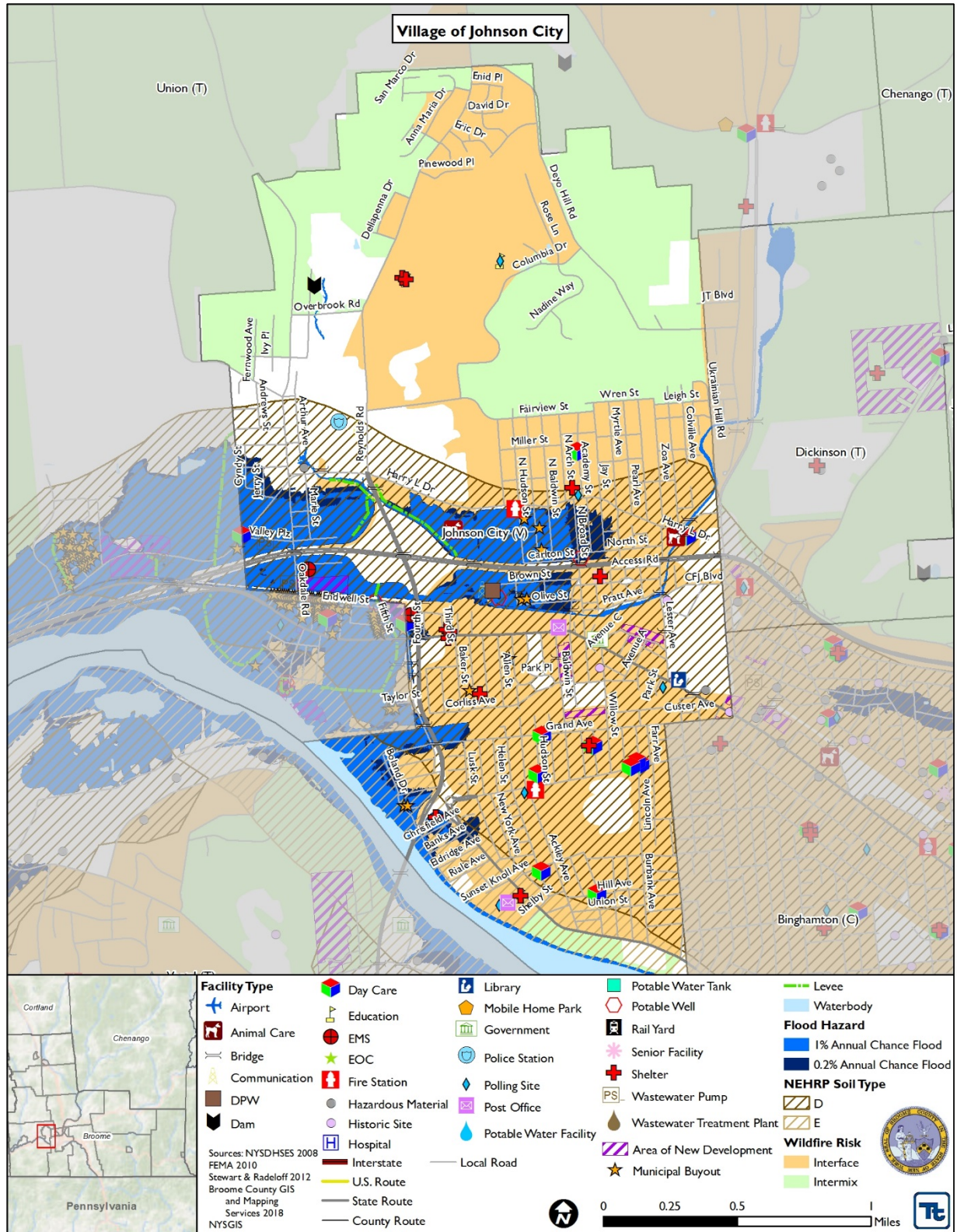
Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

9.12.9 Hazard Area Extent and Location

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



Figure 9.12-1. Village of Johnson City Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	DPW Complex Resiliency Improvements		
Project Number:	V. Johnson City-2		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	<p>The Village of Johnson City Department of Public Works Facility is located within the floodplain. Increased rainfall and flooding may damage the DPW offices which would impede municipal response to local disasters and hazards. The location of the DPW offices on the first floor could also lead to repetitive loss which would reduce the effectiveness of the department.</p> <p>During Tropical Storm Lee, the Village of Johnson City's DPW complex was inundated, severely damaging equipment and forcing the staff to relocate to inadequate, temporary facilities at Village Hall. During extreme weather events, DPW employees often work long shifts and require use of the facility locker room to rest before going back out. The current space at Village Hall is inadequate.</p>		
Action or Project Intended for Implementation			
Description of the Solution:	This project would relocate the DPW's administration offices and employee locker room to a second-story that would be located above the base flood elevation. The project also would construct a new 3,000 square-foot maintenance building and a 13,041 square-foot garage for the village's vehicles.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" 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	Estimated Benefits (losses avoided):	protects the DPW administrative offices and employee locker room by relocating them above base flood elevation; ensures uninterrupted public works services that protect residents, businesses, and institutions during severe weather events
Useful Life:	25 years	Goals Met:	1
Estimated Cost:	\$8.3 million-\$10.8 million	Mitigation Action Type:	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 6 months of receiving funds
Estimated Time Required for Project Implementation:	14 months	Potential Funding Sources:	NY Rising, CDBG, FEMA HMGP and PDM
Responsible Organization:	Village of Johnson City Public Works	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Construct new DPW complex outside of the floodplain	\$10 million	Too costly; might not have suitable land to construct
	Install floodwall around the complex	\$1 million	May not protect the facility from larger flood events
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Figure 9.12-2. Location Map of DPW Complex Resiliency Improvements



Action Worksheet		
Project Name:	DPW Complex Resiliency Improvements	
Project Number:	V. Johnson City-2	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protect DPW from flood damage; protect equipment
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	The village has legal authority over the building and project
Fiscal	0	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood and Severe Storm
Timeline	1	Project can be completed within 5 years
Agency Champion	1	
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Stormwater Retention Facility		
Project Number:	V. Johnson City-12		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	The Johnson City School District property and Village park at 25 N. Hudson Street does not have the capacity to limit water runoff which causes significant damage to the school's football field, storage facilities, and maintenance buildings. Repeated heavy rainfall or flood events may cause significant damage both to facilities and the land on this property.		
Action or Project Intended for Implementation			
Description of the Solution:	Install underground stormwater storage units at Johnson City School District athletic fields and park. This will increase the storage capacity and reduce water runoff. This will also reduce or eliminate damage to the school's fields, storage facilities, and maintenance buildings.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input checked="" 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:	100-year	Estimated Benefits (losses avoided):	Reduce flooding, protect fields and school equipment and storage facilities
Useful Life:	25 years	Goals Met:	1, 5
Estimated Cost:	\$35,000	Mitigation Action Type:	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Within 6 months of receiving funds
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	NY Rising, CDBG, FEMA HMGP and PDM, Municipal Budget
Responsible Organization:	Village Sewer Department, Engineer and Johnson City School District	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate the storage facilities and maintenance buildings	\$200,000	Structures would be protected; however, the fields would still be damaged
	Construct a floodwall around the field	\$200,000	While it would protect the structures and fields, it may not protect against all floods; not cost effective
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Figure 9.12-3. Location Map of the Johnson City School District Athletic Fields



Source: Google Maps 2018

Note: Village of Johnson City Northside Park is located to the north of Gedrick Avenue, JC School property is located to the south of Gedrick Avenue



Action Worksheet		
Project Name:	Stormwater Retention Facility	
Project Number:	V. Johnson City-12	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect fields and structures from flood damage
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Need to find funding to complete project
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood and Severe Storm
Timeline	1	To be completed within 5 years
Agency Champion	0	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	