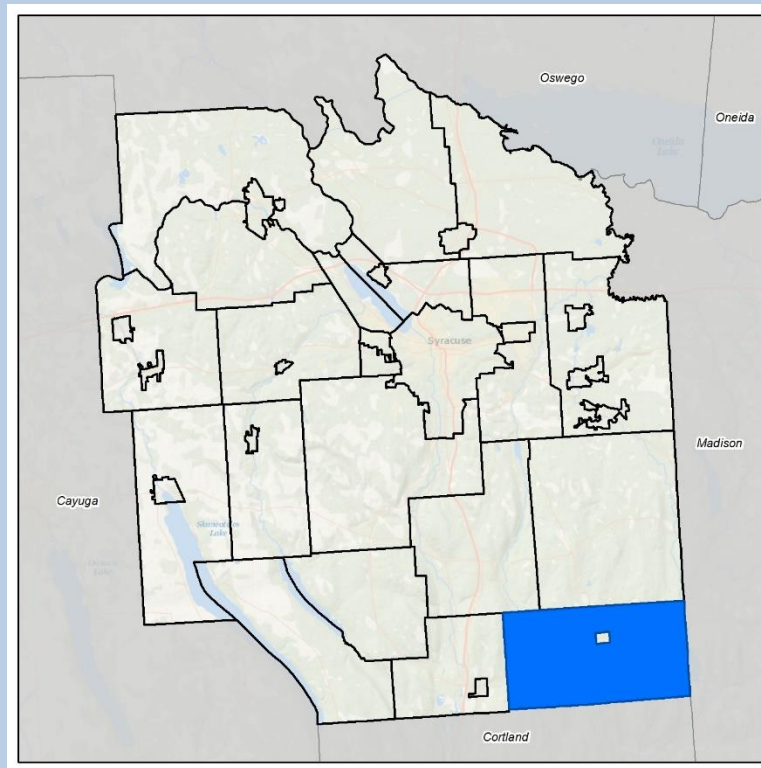




MUNICIPAL ANNEX | Town of Fabius



Total Population
(2010 Census)

1,612



Total Number of
Buildings

1,717



Number of National
Flood Insurance
Program (NFIP) Policies
and Percent in
Regulatory Floodplain

7 (29%)

Number of Repetitive
Loss (RL) Properties

0



Total Agricultural Land
(acres)

9,500.0



Harmful Algal Bloom
Impacted Waterbody

Yes



Total Land
(square miles)

46.4

Percent of Buildings
in Regulatory
Floodplain

1%



Proposed
Project
Types

Local Plans and Regulations,
Education and Awareness
Programs, and Natural
Systems Protection



Mitigation
Focus

Multi-Hazard



9.11 TOWN OF FABIUS

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

9.11.1 Hazard Mitigation Planning Team

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

Primary Point of Contact	Alternate Point of Contact
Name: Melanie Villardi Title: Town Supervisor Phone Number: 315-436-8305 Address: 7786 Main Street Fabius, NY 13063 Email: mlardi@twcnny.rr.com	Name: Deborah Foster Title: Councilperson Phone Number: 315-683-5395 Address: 7786 Main Street Fabius, NY 13063 Email: d.foster@me.com
Floodplain Administrator	
Name: Mike Decker Title: Code Enforcement Officer Phone Number: 315-378-2722 Address: 7786 Main Street Fabius, NY 13063 Email: mdecker@manliusvillage.org	

9.11.2 Municipal Profile

The Town of Fabius lies at the southeastern border of Onondaga County in western New York State. The De Ruyter Reservoir is partially located at the eastern portion of the town. The Town of Fabius has a total area of 46.8 square miles. The De Ruyter Reservoir is partially located at the eastern portion of the town. The Town of Fabius is bordered to the north by Towns of Pompey and Lafayette, to the south by Cortland County, to the east by Madison County, and to the west by the Town of Tully. New York State Route 91 is a north-south highway, which intersects New York State Route 80, an east-west highway at the Village of Fabius. Refer to Section 9.11 (Village of Fabius) for their individual annex. There are several communities located within the town: Apulia (hamlet), Gooseville Corners, Keeney (hamlet), and Vincent Corners. The estimated 2016 population was 1,974, which is a 22.5 percent increase in population from 2010 (1,612 persons).

Data from the 2016 U.S. Census American Community Survey estimates that 6.3 percent of the town population is five years of age or younger, and 11.4 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

History and Cultural Resources

The region was part of the Central New York Military Tract used to pay soldiers of the American Revolution. The town was formed in March 1798 from Pompey and was one of the original townships in the Military Tract established in 1790. The town name, "Fabius," probably refers to any one of a number of famous Romans, but exactly which one is no longer known.



The entire town embraced all of the present towns of Fabius, Tully, Preble and Scott, nearly all of Truxton and Cuyler and the south parts of Otisco and Spafford--a territory ten by twenty miles in extent. In April 1808, Fabius was reduced to its present limits by the formation of Cortland County, which took off nearly all of the towns of Truxton and Cuyler.

Growth/Development Trends

The Town of Fabius did not note any residential/commercial development that has occurred since 2013 or any planned major residential or commercial development, or major infrastructure development anticipated in the next five years.

Table 9.11-1. 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					
None identified					
Known or Anticipated Development in the Next Five (5) Years					
None identified					

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

9.11.3 Hazard Event History Specific to the Town of Fabius

Onondaga County has a history of natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The Town of Fabius' history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Onondaga County. Table 9.11-2 provides details regarding municipal-specific loss and damages the town 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 9.11-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
April – May 2011	Severe Storms, Flooding, Tornadoes, and Straight-Line Winds (FEMA-DR-1993)	Yes	<p>A slow moving warm front pushed northward across central New York late in the afternoon on April 25th. Severe weather developed, and in addition to reports of severe wind damage and hail, plenty of wind shear in the vicinity of the warm front allowed for a few super-cell thunderstorms and tornadoes to develop. In addition, areas of heavy rain caused significant flash flooding in several locations of central New York.</p> <p>On May 26, a deep upper level low pressure system shifted east from the mid-Mississippi Valley region through the afternoon and evening, allowing numerous showers and thunderstorms to develop. Many reports of large hail and</p>	Although the county was impacted, the town did not report damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			damaging winds occurred in central New York.	
June 30- July 1, 2015	Flash Flood	No	An unseasonably strong storm system tapping into above normal moisture sources across the Great Lakes and Northeast triggered multiple heavy rain producing thunderstorms across the region. Localized torrential rainfall in central New York caused serious urban flash flooding in the Syracuse, NY metropolitan area. Damages are estimated between three and five million dollars.	Although the county was impacted, the town did not report damages.
July 1, 2017	Flash Flood	No	A tropical moisture laden air mass produced numerous showers and thunderstorms which traveled repeatedly over the same areas of the Finger Lakes Region and Upper Mohawk Valley. Widespread flash and urban flooding developed in portions of Cayuga, Onondaga, Madison and Oneida counties. Hardest hit areas were the villages and towns of Moravia, Chittenango, Oneida, and Utica to name a few. Total rainfall amounts along a narrow corridor from Moravia to Utica generally ranged from 2.5 to 5 inches, most of which fell in less than 1 to 2 hours. Total damages from this event range from \$10-\$15 million dollars countywide.	The town sustained \$800,000 in flood damage to roads.
September 15, 2017 to October 6, 2017	NYSDEC Designated Harmful Algal Bloom	No	Algal bloom in DeRuyter Lake	Ban on swimming and drinking use of reservoir water. Negative ecological impacts.
August 31, 2018 to September 21, 2018	NYSDEC Designated Harmful Algal Bloom	No	Algal bloom in DeRuyter Lake	Ban on swimming and drinking use of reservoir water. Negative ecological impacts.

Notes:

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



The above photo demonstrates the extent of the 2017 Harmful Algae Bloom in Deruyter Reservoir, which persisted for approximately a month, severely impacting the recreational and ecological quality of the waterbody. Photo obtained from the Tioughnioga Lake Preservation Foundation website.

9.11.4 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazards of greatest concern and risk to the Town of Fabius. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk Ranking

In Table 9.11-3 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 Onondaga 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 Town of Fabius. The Town of Fabius 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 town indicated that harmful algal blooms are an additional high priority hazard.

Table 9.11-3. Town of Fabius Calculated Hazard Ranking

HAZARD	Drought	Earthquake	Flood	Geologic	Harmful Algal Bloom	Invasive Species	Severe Storm	Severe Winter Storm
RELATIVE RISK FACTOR	High	High	Medium	Low	High	Low	High	High

Note: 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

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

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 these criteria, the jurisdiction must identify an action to achieve this level of protection (NYSDHSES 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 9.11-4. 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	
None identified						

Source: FEMA 2016, SOPA 2018

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- *Storm Flooding - An improperly sized culvert (approximately 8' wide) under Bardeen Road creates flow blockages during heavy rain events, causing multiple road closures events over the past 5 years, lasting about 2-3 days each. The severity of these flooding events has been increasing, due to accumulated debris and erosion of the northern road shoulder.*
- *Algal Blooms - While algae blooms are not new, they are occurring in Deruyter Reservoir more noticeably than normal. Harmful algae blooms (HABs) occur in the fall, due to several combined factors: warm, sunny, calm days, stormwater runoff (nutrients) that accumulates in the lake over the summer, and a destratification of the reservoir's water column. Both animals and people can get sick from contact with HABs. This results in a decrease of recreational opportunities and ecological issues.*

The following vulnerabilities have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available sources:

- *Road erosion along Bardeen Road*
- *Harmful algal blooms in DeRuyter Reservoir due to high nutrient loads.*

9.11.5 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 Town of Fabius.

Table 9.11-5. 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	Town	Town board	Town of Fabius Comprehensive Plan (2005)
Capital Improvements Plan	Yes	Town	Town board	Capital Improvements Plan
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	No	-	-	-
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	No	Town	Town board	Town of Fabius Emergency Management Plan (n.d.)
Emergency Operation Plan	Yes	Town	Town Supervisor	Town of Fabius Disaster Response Plan (n.d.)
Evacuation Plan	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes	State & Town	Code Officer	Town of Fabius Building Code
Zoning Ordinance	Yes	Town	Code Officer	Town of Fabius Zoning Law (Local Law 1-2007)
Subdivision Ordinance	No	-	-	-
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Code Officer	Town of Fabius Local Law 1-2016
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	Code Officer	State mandated BFE+2 for all construction, both residential and non-residential
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	Yes	Town	Town/Planning Board	Town of Fabius Zoning Code Article VI (Local Law 1-2007)



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	No	-	-	-
Municipal Separate Storm Sewer System (MS4)	No	-	-	-
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 Town of Fabius.

Table 9.11-6. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Town Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Fire Department
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	No	No staff persons but have access to consultants as needed
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	No	Department of Public Works
Planners or engineers with an understanding of natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Officer
Surveyor(s)	No	-
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	No	-
Emergency Manager	No	-



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

Fiscal Capability

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

Table 9.11-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other	No

Community Classifications

The table below summarizes classifications for community programs available to the Town of Fabius.

Table 9.11-8. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
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)	No	-	-
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 Town of Fabius' capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.11-9. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited*	Moderate	High
Planning and regulatory capability	X		
Administrative and technical capability	X		
Fiscal capability	X		
Community political capability	X		
Community resiliency capability	X		
Capability to integrate mitigation into municipal processes and activities	X		
* Limitations are attributed to the limited number of town staff members.			



National Flood Insurance Program

The Town of Fabius does not maintain a list/inventory of properties that have been flood damaged. The NFIP administration services and functions provided by the municipality are limited as flooding in the town has a very low rate of flood occurrence. The town enacts design standards supporting floodplain management and meeting NFIP requirements during site plan review. The municipality has not considered joining the Community Rating System (CRS) program to reduce flood insurance premiums for their insured residents, however, municipal officials and/or community members may be interested in attending if a CRS seminar was offered locally.

NFIP Floodplain Administrator (FPA)

Mike Decker, Code Enforcement Officer

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Fabius.

Table 9.11-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Town of Fabius	7	1	\$1,037	0	0	2

Source: FEMA Region 2 2018.

(1) Policies, claims, RL, and SRL statistics provided by FEMA Region 2, and are current as of June 30, 2018. Total number of RL properties does not include SRL properties. Number of claims represents claims closed by July 31, 2018.

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

(3) Number of policies inside and outside of flood zones is based on latitude and longitude coordinates provided by FEMA Region 2 in the policy file. FEMA noted that for a property with more than one entry, more than one policy may have been in force or more than one Geographic Information System (GIS) specification was possible. Number of policies and claims, and claims total, exclude properties outside Otsego County boundary, based on provided latitude and longitude coordinates.

RL Repetitive Loss

SRL Severe Repetitive Loss

Resources

The FPA is the sole person responsible for floodplain administration. NFIP administration services and functions include permit review, inspections, and record-keeping. The town does not conduct outreach on flood hazards/risk and flood risk reduction. The FPA noted that the town does have access to resources to determine possible future flooding conditions from climate change. The FPA does 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.

Compliance History

The Town of Fabius is in good standing in the NFIP. The FPA is unsure of the date of the last compliance audit [e.g. Community Assistance Visit (CAV)]. According to data received by NYSDEC, a compliance audit has not been conducted for the municipality.

Regulatory

Flood Damage Prevention Ordinance: The Town of Fabius Flood Damage Prevention Ordinance (Local Law 1 of 2016) 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.
- Qualify for and maintain participation in the National Flood Insurance Program.

The objectives of the chapter are to:

- Protect human life and health.
- Minimize expenditure of public money for costly flood-control projects.
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- Minimize prolonged business interruptions.
- 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.
- 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.
- Provide that developers are notified that property is in an area of special flood hazard.
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

The FPA noted that there are other local ordinances, plans or programs that support floodplain management and meeting the NFIP requirements. The FPA stated that the town has not considered joining 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

Existing planning initiatives in the town include a Comprehensive Plan and Disaster Response Plan that integrate hazard mitigation.

Comprehensive Plan: The Town of Fabius's Comprehensive Plan was adopted in September of 2005. It was developed by the Zoning Committee with assistance from Planning/Environmental Consultants. The Plan represents a desire to examine current physical and social characteristics in the town, evaluate changes that have occurred in the past, and assess the potential for future change. Relevant goals include the preservation of unique or environmentally sensitive areas (e.g., wetlands and floodplains) and protection the town's groundwater quality. The Comprehensive Plan recommends minimizing negative environmental impacts on drainage ways,



aquifers, wooded areas, steep slopes and wetlands, and preserving existing ground and surface water supplies by guiding future growth to specific areas.

Disaster Response Plan: The Town of Fabius Disaster Response Plan outlines the locations of assembly and command, responsibilities and functions, available resources through the Town of Fabius Highway Department, and the chain of command in the instance of a disaster. To mobilize during a time of emergency, the Town of Fabius activates Emergency Operations through the Onondaga County Sheriff's Department, the Superintendent of the Highway Department, Building Inspector of the Town of Fabius, and the Chiefs from both Fabius and Apulia Fire Departments.

Onondaga County Hazard Mitigation Plan: The Town of Fabius supports county-wide initiatives identified in Section 9.1 of the County Annex.

These planning resources collectively help the town to guide land use and development to protect critical resources and ensure the town continues providing services to the community. These services include potential hazard mitigation improvements through natural resource preservation and water quality protection.

Opportunities for Future Integration

Updates to existing plans (town Comprehensive Plan and Disaster Response Plan) and new plans could include discussion of natural hazard risk and refer to the countywide Hazard Mitigation Plan.

Regulatory and Enforcement (Ordinances)

Existing Integration

Zoning Ordinance: The Town of Fabius' Comprehensive Zoning Law (Local Law 1 of 2007) establishes a comprehensive zoning plan for the Town of Fabius for the protection and promotion of the public health, safety, and welfare of the town.

The Town of Fabius municipal zoning and flood ordinance considers natural hazard risk and require developers to take additional actions to mitigation natural hazard risk. The town Planning Board and ZBA are provided with the town Local Laws and Zoning Code to guide their decisions with respect to natural hazard risk management.

Opportunities for Future Integration

The Planning Board and ZBA could also be provided with access to NYSDEC and the Army Corps of Engineers (USACE) for assistance in decision making.

Operational and Administration

Existing Integration

The town has established a Planning Board, Zoning Board of Appeals, Assesment Board of Review, and Code Enforcement Office to support land use decisions, public health and safety and assure compliance with regulations, ordinances and the Comprehensive Plan.

Planning Board: The Town of Fabius' Planning Board is comprised of a chairman and five Board members.

Zoning Board: The Town of Fabius' Zoning Board in comprised of a chairman and four Board members.

Hazard Prone Structures: Where appropriate, the Town of Fabius supports the retrofitting or purchase and 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 town identifies facilities that are viable candidates for



retrofitting based on cost-effectiveness versus relocation. Where retrofitting or purchase is determined to be a viable option, the town considers implementation based on available funding.

Mutual Aid Agreements: The Town of Fabius works to create, enhance, and maintain mutual aid agreements with neighboring communities.

Opportunities for Future Integration

The Planning Board and the Zoning Board of Appeals could be more proactive rather than reactive to applications. Staff could receive additional training regarding natural hazard risk.

Funding

Existing Integration

The Town of Fabius' municipal budget includes line items for mitigation projects/activities. The town has not pursued grant funds for mitigation-related projects in the past and does not have any other mechanism to fiscally support hazard mitigation.

Opportunities for Future Integration

The town could supplement allocated municipal funding for mitigation projects by applying for grant funding.

Education and Outreach

Existing Integration

The Town of Fabius operates a municipal website (<http://townoffabius.com/>) which includes community news and information. The website provides information related to safety and hazard mitigation including current project information and links to the Comprehensive Plan and Zoning Ordinance. The town conducts and facilitates community and public education and outreach for residents and businesses including the following to promote and effect natural hazard risk reduction:

- Provide and maintain links to the Onondaga County HMP website, and regularly post notices on the municipal homepage referencing the Onondaga County 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 the town 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 town could expand the information available on the municipal website to include additional hazards. The town could develop education/outreach programs, particularly to the impact of blue green algae on drinkable or swimmable waters.

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.



Temporary and Permanent Housing

The Town of Fabius has not identified potential sites for the placement of temporary housing for residents displaced by a disaster; however, the county identified potential locations throughout the county, as shown in Section 4 (County Profile), Table 4-3 and Figure 4-18 that can be utilized by municipal residents.

At this time, there are no known areas available for permanent housing relocation with the town. To accommodate longer term housing needs of permanently displaced residents, there is an existing supply of vacant housing units within the county which may be able to satisfy and absorb those housing needs. The county also has ample buildable land availability throughout its communities to satisfy construction of new housing units if needed, as mapped in Section 4, figure 4-20 in Volume I of this plan. Of note, given the nature of the hazards of concern to Onondaga County, the extent of housing need is also not likely to exceed currently available housing stock for all but the most extreme and widespread hazard events.

Evacuation and Sheltering Needs

During a time of disaster, both Fabius-Pompey Schools (Middle/High School and Elementary School) within Fabius will be available for the use as temporary shelters. Each of these areas are ADA-compliant and compliant with the NYS Uniform Fire Prevention and Building Code for a maximum occupancy of 100+ individuals. Primary evacuation routes include Route 80 and Route 91.

Per the County Emergency Management Plan, in the event of a hazard occurrence, the Department of Emergency Management is tasked with coordinating evacuation procedures with the Sheriff's Department, the On-Scene Commander, the Transportation Coordinator, the ARC, hospitals, special facilities, the fire service and the Health Department. The Sheriff's Department is responsible for implementing traffic control procedures including coordination of vehicular traffic and protection of resources, facilities and services in the affected areas. As noted in Section 4, Figure 4-19 in Volume I of this plan, the primary roads and highways are the evacuation routes for Onondaga County; the county is fortunate to have a variety of well-connected arterial and collector roadways to provide a variety of routing options during times of large-scale evacuation.

The American Red Cross (ARC) has primary contractual responsibility to provide sheltering, including short term housing, for Onondaga County individuals and families during an emergency occurring in Onondaga County. Services of the ARC include emergency sheltering needs, mass care, feeding, information and referral, and special population assistance. A confidential shelters list is maintained by the Department of Emergency Management and the ARC which identifies capacity for 15,000+ residents across Onondaga County. The ARC is responsible for maintaining shelter and temporary housing agreements with selected facilities.

9.11.6 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 9.11-11. 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.
TFB-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Flooding		Town	Ongoing Capability	Cost	1. Discontinue
						Level of Protection	2. Identify buildings within floodplain. Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.
						Damages Avoided; Evidence of Success	3. Ongoing capability
TFB-1b	Where appropriate, support 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. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Flooding		Town	Ongoing Capability	Cost	1. Discontinue
						Level of Protection	2. Identify buildings within floodplain. Where appropriate, support 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. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.
						Damages Avoided; Evidence of Success	3. Ongoing capability
TFB-2	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: • Provide and maintain links to the Onondaga	Multiple		Town	Ongoing Capability	Cost	1. Discontinue
						Cost	1.
						Level of Protection	2. Ongoing capability 3.



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>County HMP website, and regularly post notices on the municipal homepage referencing the Onondaga County HMP webpages.</p> <ul style="list-style-type: none">• 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 the town 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						



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.
	information on flood insurance and the availability of mitigation grant funding. Municipal outreach activities to be supported by the County, as identified at County initiative OC-0. See above						
TFB-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	Multiple		Town	Ongoing Capability	Damages Avoided; Evidence of Success	3. Discontinue
						Level of Protection	2. Create/enhance/ maintain mutual aid agreements with neighboring communities.
						Damages Avoided; Evidence of Success	3. Ongoing capability
TFB-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	Multiple		Town	Ongoing Capability	Cost	1. Discontinue
						Level of Protection	2. Support County-wide initiatives identified in Section 9.1 of the County Annex.
						Damages Avoided; Evidence of Success	3. Ongoing capability
TFB-8	Support/Participate in the Stream Team program offered by the Onondaga County SWCD, to assist in the removal of debris, log jams, etc. in flood vulnerable stream sections.	Flooding		Town	No Progress	Cost	1. Discontinue
						Level of Protection	2. County Program no longer exists.
						Damages Avoided; Evidence of Success	3. County Program no longer exists.





Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Fabius has not 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 Town of Fabius has performed ongoing maintenance projects to reduce the impact of flooding but has not identified specific mitigation projects/activities that have been completed but were not identified in the previous mitigation strategy in the 2013 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Fabius participated in a mitigation action workshop on January 14, 2019 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 9.11-12 summarizes the comprehensive-range of specific mitigation initiatives the Town of Fabius 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 9.11-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.11-12. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazards to be Mitigated	Description of Problem	Description of Solution?	Critical Facility (Y/N)	Environmental and Historic Preservation (EHP) Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
T. Fabius- 1	Bardeen Road Bridge	1	Severe Storm, Flood	An improperly sized culvert (approximately 8' wide) under a town road creates flow blockages during heavy rain events, causing multiple road closures events over the past 5 years, lasting about 2-3 days each. The severity of these flooding events has been increasing, due to accumulated debris and erosion of the northern road shoulder.	The bridge/culvert needs to be replaced due to deterioration. Its size needs to be expanded to a large box culvert. Its beyond its life expectancy.	No	Yes	2-6 months	DPW, DEC	\$500,000	Could create more costs, if left untreated	State of New York DEC	High	LPR	PP, PR, NR, SP
T. Fabius-2	DeRuyter Reservoir Water Quality Improvement	1,2,4, 5	Harmful Algal Bloom	While algae blooms are not new, they are occurring in DeRuyter Reservoir more noticeably than normal. Harmful algae blooms (HABs) occur in the fall, due to several combined factors: warm, sunny, calm	It is necessary going forward to re-direct mountain/stream/agriculture run off to minimize any possible risk of algal blooms. The Town of Fabius can act as a coordinator between local residents,	No	Yes	3-5-year plan	New York State thruway authority, DEC, Fabius Code/ Zoning	\$12-15 million	Public Health, Environmental Sustainability	State of New York, DEC, New York State thruway authority	High	NSP, EAP	NR, PR, PP, PI



				days, stormwater runoff (nutrients) that accumulates in the lake over the summer, and a destratification of the reservoir's water column. Both animals and people can get sick from contact with HABs. This results in a decrease of recreational opportunities and ecological issues.	agriculturalists, researchers, and funding agencies (such as the Soil and Water Conservation District) for determining causal pathways of nutrients entering the lake and specific mitigation measures that can decrease nutrient runoff. Additionally, any necessary outreach/notification efforts can be posted on the town's website, in coordination with the DeRuyter Lake Association.										
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Notes:

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

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

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator

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:





HMA Hazard Mitigation Assistance
N/A Not applicable
NFIP National Flood Insurance Program
OEM Office of Emergency Management

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 also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities

Critical Facility:


Yes  Critical Facility located in 1% floodplain



Table 9.11-13. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
T. Fabius- 1	Bardeen Road Bridge (culvert widening)	1	1	1	1	1	0	0	1	1	0	1	1	1	1	12	High
T. Fabius- 2	DeRuyter Reservoir Water Quality Improvement	1	1	1	1	1	1	0	1	1	0	1	1	1	1	12	High

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



9.11.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.11.8 Staff and Local Stakeholder Involvement in Annex Development

The Town of Fabius 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 town departments, including: Town Supervisor and Code/Zoning Department. The Town Supervisor represented the community on the Onondaga 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.

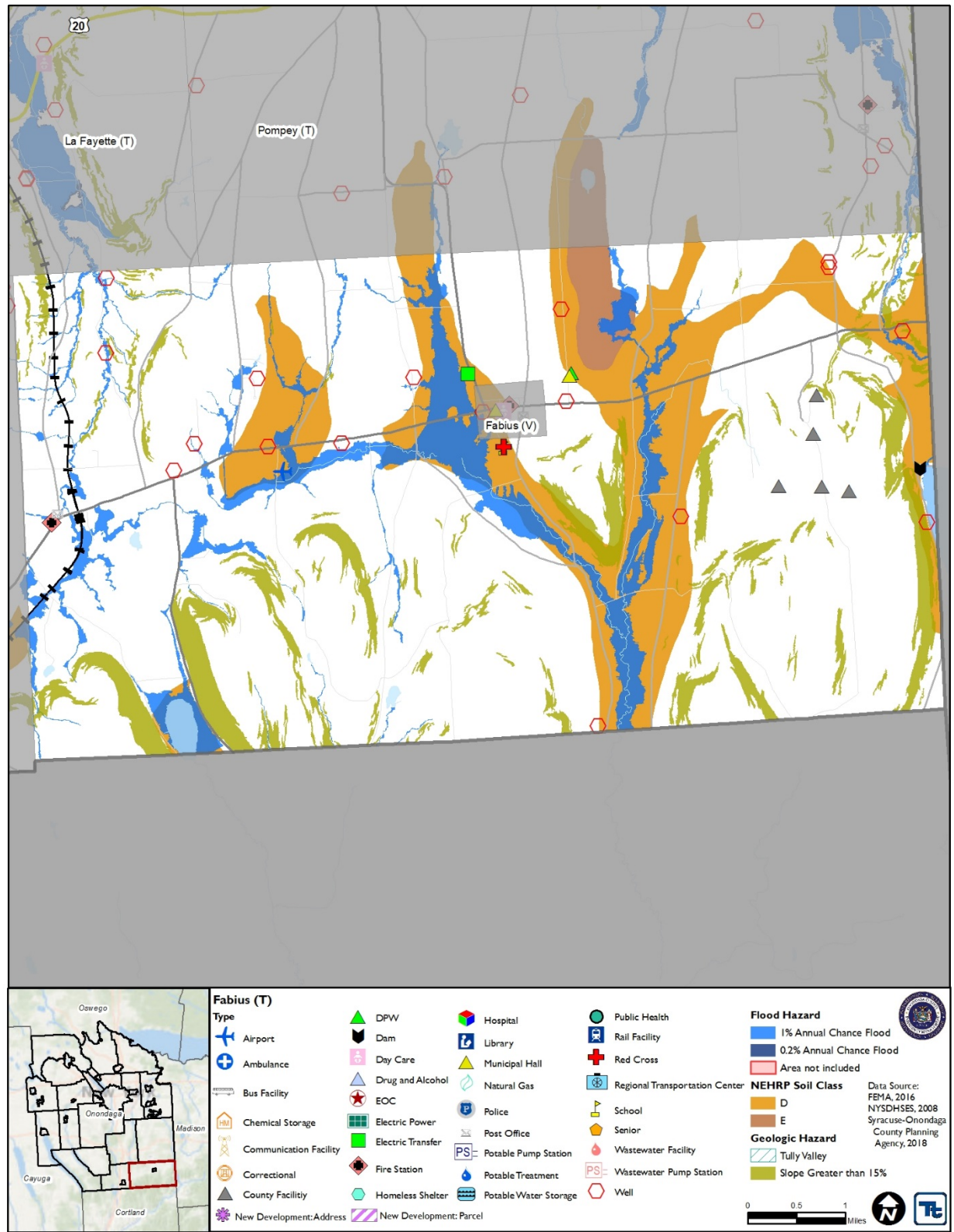
Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.11.9 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Town of Fabius that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Fabius has significant exposure. A map of the Town of Fabius hazard area extent and location is provided on the following page. This map indicates the location of the regulatory floodplain as well as identified critical facilities within the municipality.



Figure 9.11-1. Town of Fabius Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	Bardeen Road Bridge (culvert widening)		
Project Number:	T. Fabius -1		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Flood		
Description of the Problem:	An improperly sized culvert (approximately 8' wide) under Bardeen Road (bridge crosses West Branch of the Tioughnioga Creek) creates flow blockages during heavy rain events, causing multiple road closures events over the past 5 years, lasting about 2-3 days each. The severity of these flooding events has been increasing, due to accumulated debris and erosion of the northern road shoulder.		
Action or Project Intended for Implementation			
Description of the Solution:	The bridge/culvert needs to be replaced due to deterioration. Its size needs to be expanded to a large box culvert. Its beyond its life expectancy.		
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:	To be determined	Estimated Benefits (losses avoided):	Reduction in flooding and road closure events
Useful Life:	30 years	Goals Met:	1
Estimated Cost:	\$500,00	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High (very)	Desired Timeframe for Implementation:	Within 6 months
Estimated Time Required for Project Implementation:	2-6 months	Potential Funding Sources:	State of New York, DEC
Responsible Organization:	DPW, DEC	Local Planning Mechanisms to be Used in Implementation if any:	Planning Board, DPW Engineer
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues
	Remove bridge.	N/A	Not technically feasible. Bridge is necessary.
	Relocate bridge.	N/A	Not technically feasible. Roadway cannot be moved.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Bardeen Road Bridge (culvert widening)	
Project Number:	T. Fabius-1	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect bridge users from flood risk
Property Protection	1	Project will protect roadway from flooding damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	Project will likely require NY DEC permitting
Fiscal	0	Project will require funding assistance
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	1	DPW
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	DeRuyter Reservoir Water Quality Improvement		
Project Number:	Town of Fabius -2		
Risk / Vulnerability			
Hazard(s) of Concern:	Algal Bloom		
Description of the Problem:	While algae blooms are not new, they are occurring in Deruyter Reservoir more noticeably than normal. Harmful algae blooms (HABs) occur in the fall, due to several combined factors: warm, sunny, calm days, stormwater runoff (nutrients) that accumulates in the lake over the summer, and a destratification of the reservoir's water column. Both animals and people can get sick from contact with HABs. This results in a decrease of recreational opportunities and ecological issues.		
Action or Project Intended for Implementation			
Description of the Solution:	It is necessary going forward to re-direct mountain/stream/agriculture run off to minimize any possible risk of algal blooms. The Town of Fabius can act as a coordinator between local residents, agriculturalists, researchers, and funding agencies (such as the Soil and Water Conservation District) for determining causal pathways of nutrients entering the lake and specific mitigation measures that can decrease nutrient runoff. Additionally, any necessary outreach/notification efforts can be posted on the town's website, in coordination with the DeRuyter Lake Association.		
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:	N/A: High	Estimated Benefits (losses avoided):	Public Health, Environmental Sustainability
Useful Life:	25-50 years/yearly oversight	Goals Met:	2, 4
Estimated Cost:	\$12-15 million	Mitigation Action Type:	Natural Systems Protection
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2 years
Estimated Time Required for Project Implementation:	3-5-year plan	Potential Funding Sources:	State of New York, DEC, New York State highway authority
Responsible Organization:	New York State Thruway Authority, DEC, Fabius Code/ Zoning Department	Local Planning Mechanisms to be Used in Implementation if any:	Planning, Code/Zoning enforcement, Engineering
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	
	Divert water run off at Highland Forest	\$1.5- 3 million	Engineering studies will be required to find out if water diversion can take place on parcels of land around the perimeter of reservoir
	Create retention ponds in area	\$1.5- 3 million	Engineering study to see if water runoff could go to manmade retention ponds
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			



Update Evaluation of the Problem and/or Solution:	
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Action Worksheet		
Project Name:	DeRuyter Reservoir Water Quality Improvement	
Project Number:	T. Fabius- 2	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect water supply
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	The Project will require funding assistance
Environmental	1	Project will reduce nutrient runoff.
Social	1	
Administrative	0	
Multi-Hazard	0	Harmful Algal Bloom
Timeline	1	
Agency Champion	1	Fabius Code/Zoning Department
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	