



9.4 TOWN OF CAMBRIDGE

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

9.4.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Jim Buckley, Jr., Highway Superintendent 846 County Route 59, Cambridge, NY 518-378-8738	Catherine (Cassie) Fedler, Town Supervisor 846 County Route 59, Cambridge, NY (518) 796-1877 cfedler@co.washington.ny.us

9.4.2 Municipal Profile

The Town of Cambridge is in southern Washington County, sharing part of its southern border with Rensselaer County. The town has a total area of 36.5 square miles, of which 0.1 square miles is water. Significant waterways in the Town include the Hoosic River, Wampecack Creek, Pencil Brook, and Whipple Brook.

Cambridge is an agricultural town with a population of about 2,000 and falling – according to the 2010 Census, the community's population was 2,021. The population has shrunk by about 8.5% in the last 10 years, with almost no business district or development. Most of the village of Cambridge is in the township of White Creek, and many of the “Cambridge” addresses are either in White Creek or the Town of Jackson. The Town of Cambridge covers an area of 36.5 square miles and has 64 center-line miles of town roads, 47.6 of them paved, the rest gravel, and 19.5 centerline miles of County Road. State Route 372 forms most of the north-east border and then crosses through for about 1.5 miles.

Growth/Development Trends

The Town of Cambridge did not note any recent residential/commercial development since 2010 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

Table 9.4-1. 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 2010 to present					
None identified by the municipality.					
Known or Anticipated Development in the Next Five (5) Years					
None identified by the municipality.					

* Only location-specific hazard zones or vulnerabilities identified.

9.4.3 Natural Hazard Event History Specific to the Municipality

Washington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and



impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.4-2. Hazard Event History

Dates of Event	Event Type (FEMA Disaster Declaration if applicable)	Washington County Designated?	Summary of Damages/Losses
December 11-31, 2008	Severe Winter Storm DR-1827	Yes	A significant mixture of snow, sleet and freezing rain occurred from Thursday evening, into midday Friday. Snow and sleet accumulations of 2 to 5 inches, along with ice accretion of around one-half inch, led to numerous reports of trees and power lines down.
August 26-September 5, 2011	Hurricane/T.S. Irene DR-4020	Yes	Major flooding occurred on the Hoosic River in the Oak Hill section of Cambridge at the southern end of town. The Eagle Bridge river gage located on the right bank 0.5 miles upstream from Case Brook, 1.2 miles downstream from Walloomsac River, and 1.2 miles southeast of Eagle Bridge exceeded its 11-foot flood stage at 1:31 pm EST August 28th, its 13-foot moderate flood stage at 3:43 pm, its 16-foot major flood stage at 6:31 pm, it crested at 19.24 feet at 12:30 am August 29th, and dropped below flood stage at 2:29 pm August 29th.
October 27-November 8, 2012	Hurricane/T.S. Sandy EM-3351	Yes	Trees and wires were reported down due to high winds in the Town of Cambridge. One of the trees landed on a vehicle in Cambridge, but no injuries occurred.
February 29, 2016	Strong Winds	N/A	A few town roads experienced washouts, and the Town highway crew brought in 2 loads of gravel, but no major damage was reported.

Notes:

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

9.4.4 Hazard Vulnerabilities and Ranking

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

Natural Hazard Risk/Vulnerability Risk Ranking

As discussed in Section 5.3 (Hazard Ranking), each participating town or village may have differing degrees of risk exposure and vulnerability compared to Washington 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 Cambridge. Table 9.4-12 provides proposed mitigation initiatives for the high ranked hazards.

Table 9.4-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
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Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Earthquake	100-Year GBS: \$0 500-Year GBS: \$2,100,840 2,500-Year GBS: \$21,010,698	Occasional	28	Medium
Flood	Damage estimate not available.	Frequent	21	Medium
Severe Weather	100-Year MRP: \$25,242 500-year MRP: \$256,819 Annualized: \$1,665	Frequent	48	High
Severe Winter Weather	1% GBS: \$3,219,426 5% GBS: \$16,097,132	Frequent	51	High
Wildfire	Estimated Value in the WUI Hazard Areas: \$172,825,191	Frequent	42	High

Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract.
- f. Damage estimate for flood unavailable due to lack of digital floodplain data for Washington County.

National Flood Insurance Program (NFIP) Summary

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

Table 9.4-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	Severe Rep. Loss Prop. (1)
Cambridge (T)	1	0	0	0	0

Source: FEMA, 2016

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of April 30, 2016 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 4/30/2016.

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

Note (3) The policies inside and outside of the flood zones are unavailable due to lack of digital floodplain for Washington County.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

Critical Facilities

At the time of this HMP Update, digitized flood maps for Washington County are unavailable. In order to provide some level of beneficial analysis, a desktop analysis was performed to identify critical facilities located within the floodplain (refer to Section 5.1 [Methodology and Tools] for details). The following table identifies critical facilities located within the municipality and their exposure, if any, to the possible floodplain. This information is a resource for the municipality to determine if flood mitigation actions are appropriate based on historical events and proximity of the facility to a water body. At the time of this 2018 HMP Update, the municipality did not identify any actions associated with these facilities.



The Town of Cambridge understands the limitation of the map data and once the updated maps are available, the municipality will work with Washington County to determine which critical facilities are located within the 1% and 0.2% annual chance flood zones. Once identified, the municipality will work with the property owners and develop mitigation actions for each of the critical facilities, ensuring they will be protected to the 500-year (or worst-case scenario) level.

Table 9.4-5. Potential Flood Losses to Critical Facilities

Name	Type	Potential Flood Exposure
None identified		

Source: Washington County; NYS GIS Clearinghouse

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- The town lacks strong administrative and regulatory support for hazard mitigation. The planning board has little control over development, partly because the town has no zoning ordinance, but residents have expressed strong opposition towards the comprehensive planning activities over the years. However, the Town is not experiencing any development pressure, but rather is seeing a shrinking population, resulting in vacant houses and a shrinking tax base. As a result of these factors, hazard mitigation activities are accomplished operationally thorough routine DPW/highway department functions, including street cleaning, tree trimming, and debris removal.
- The Town of Cambridge has many slopes, and water runs from the top of the hill to the bottom of the hill.
- The town Highway Department completes street and infrastructure maintenance regularly. During heavy storms, culverts sometimes plug and road shoulders wash out, and the town repairs or replacements them. When there is a need to replace a culvert and the size can be increased, the Town will put a bigger one in. The town will also trim or re trees before major storms, if the trees or tree limbs are hanging down over the road and appear likely to come down in the next storm.
- There are three locations where culverts pose regular problems, where there is insufficient space to increase the culvert size.
 - English Rd., where there is a driveway culvert above a silage trench and another below it. Mud, slop and silage from the trench is tracked out into the road where it ends up in the ditch and then, the culverts. During winter extra snow, mixed with the same debris is pushed into the ditch as well increasing problem. The Highway department attempts to keep these culverts clear but sometimes gets behind. Attempts to change habits of the landowners have been unsuccessful.
 - Tingue Rd., a cross culvert with a history of beaver problems. During heavy run off debris would sometimes wash up against the beaver gate (a steel panel that keeps the beavers from building their dam inside of the culvert) and restrict the flow enough for the water to build up and cross the road. As Tingue is gravel the running water would cause surface erosion. Beavers are currently under control (removed) and beaver gate is not in place. Culvert was also replaced and improved this year.
 - Tingue Rd., 2 driveway culverts at the bottom of a VERY steep hill. Gravel washes off of road during rains and build up in culverts restricting flow. Ditches were dug wider and culverts were flushed this summer. A possible solution is to pave this hill. This is not a very reasonable solution though, as the road sees very little traffic, especially on that end, and there are only 5 residences, 2 of which are merely vacation homes that are only used a couple of weeks per year.
- Major problem is down on Turnpike Rd.at the Old McClellan dam at Thurber Pond. The dam is on private property, and needs to be looked at. Currently, the Town does get in there to clean it off



periodically (which may increase their liability in the event of a failure, since they are basically maintaining it.) It holds a 5-6-acre pond, plus has the entire watershed behind it. The dam is in the Town of Cambridge, but a few hundred feet downstream is the Town of White Creek, so they are just as vulnerable. A dam failure may not take out the road in the Town of Cambridge, but it would probably impact White Creek. If it fails, White Creek could lose Turnpike Rd., Owl Kill Rd., maybe some of Rt 22.

- This issue calls for an engineering study to look at the hydrology and hydraulics of the area. Also, potentially need a project to evaluate the structural condition of the dam.
- Flooding of creeks persists in town, and the town is constrained by regulations that prohibit them from going in and cleaning out debris. People want to live next to the brook, but they don't want it to flood. Flood damage reduction study needed to look at the hydrology and hydraulics of the area and propose flood mitigation solutions.
- The Town does have a beaver problem in places, but the Highway Department is vigilant about keeping the beaver dams under control. There are some beaver dams that could potentially be a problem that are well away from the roadway. There may even be some that are where the Highway Department cannot see and thus are not aware of.
- There are two man-made dams in the town, both of which are on private property. One of these, on Turnpike Road, also has a beaver problem. The dam seems very solid and even though it is away from the road, the Highway Department endeavors to keep the spill-way clear of the beaver dam. In addition, the County engineer inspected the culvert on Turnpike Road and said it was of adequate size and in good condition.

The other dam, on Stump Church Road, is nearer to the roadway and in very poor condition. The spillway gate is kept completely open to minimize pressure on the retaining wall. If this dam fails (the retaining walls tip out), it could partially, or in an extreme case, fully block the bridge next to it. There is a culvert just along the road from the bridge that would handle most, if not all, of the normal flow of the water. The spillway gate is completely open so there would not be a large volume of water held back to create a flood surge. If the dam failed during a large storm, and caused a blockage of a serious degree to the bridge, there would probably be flooding of the roadway. In the past, when the dams were full, and before the extra culvert was added nearby, the road has flooded during heavy rains or rapid snow melt. But, the water spreads wide enough before it crosses the roadway that there has never been a damage problem, just an inconvenience issue.

9.4.5 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 Cambridge.



Table 9.4-6. 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				
Master Plan	No	-	-	-
Capital Improvements Plan	No	-	-	-
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	No	-	-	-
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Local Waterfront Revitalization Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	-	-	-	Town Hall and Highway Garage Designated Emergency Shelters
Emergency Response/Operations Plan	-	-	-	Highway Department
Post-Disaster Recovery Plan	-	-	-	Shared Services
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes	State, Local	Code Enforcement Officer	New York State Uniform Fire Prevention and Building Code and State Energy Conservation Construction Code
Zoning Ordinance	No	-	-	-
Subdivision Ordinance	No	-	-	-
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Town Supervisor	Local Law #1 of 1987 (Amendment to Local Law #2 of 1984)
NFIP: Freeboard	Yes	State, Local	Code Enforcement Officer	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
NFIP: Cumulative Substantial Damages	No	-	-	-
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	No	-	-	-
Stormwater Management Ordinance	No	-	-	-
Municipal Separate Storm Sewer System (MS4)	No	-	-	-
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-



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.)
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 Town of Cambridge has a local government consisting of a Supervisor, Clerk to the supervisor, four Town Board members, Town Clerk, Assessor, and Judge. There is a Building Code Enforcement Officer, who is also Flood Plain Administrator, and a five-member Planning Board. There is a highway crew of four, plus the Superintendent. The town has access to County engineers for technical help if necessary. Shared services with other townships and the Village of Cambridge are also in effect.

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

Table 9.4-7. 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	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	Yes	Highway Department
Mutual aid agreements	Yes	Local Highway Department Shared Services
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	No	Soil Conservation Services
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	No	County Engineers
Planners or engineers with an understanding of natural hazards	No	However, highway department staff have job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazard risk
NFIP Floodplain Administrator (FPA)	Yes	Town Supervisor
Surveyor(s)	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	County Engineers
Scientist familiar with natural hazards	No	-
Emergency Manager		Highway Superintendent/Town Supervisor



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	Depending on the damage, County Engineers, Insurance Adjusters, Highway Superintendent

Fiscal Capability

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

Table 9.4-8. Fiscal Capabilities

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

Community Classifications

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

Table 9.4-9. 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)	Yes	7/7Y	5/1/17
NYSDEC Climate Smart Community	No	-	-
Storm Ready	No	-	-
Firewise	No	-	-
Disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through	No	-	-



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
website, social media)			
Public-Private Partnerships	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 website at <https://www.isomitigation.com/bcegs/>
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <https://www.weather.gov/stormready/>
- The National Firewise Communities website at <https://www.nfpa.org/Public-Education/By-topic/Wildfire/Firewise-USA>

Self-Assessment of Capability

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

Table 9.4-10. 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	Lack of Personnel		
Administrative and technical capability	Lack of Personnel		
Fiscal capability	Tax Base		
Community political capability		X	
Community resiliency capability			X
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program





NFIP Floodplain Administrator (FPA)

While the Flood Damage Prevention Ordinance indicates that the town supervisor is the FPA; LaVerne Davis, the Building Code Enforcement Officer, provided the following information.

Flood Vulnerability Summary

The only real flood area is along the Hoosick River, between the river and County Route 59. There are no houses in this area. It is pasture, woods, and some cropland. Most of the water in Cambridge runs off instead of ponding, and ends up in the neighboring townships. There are some wetlands in the town, but, they are constant marsh, so no structures are built in them.

The Town of Cambridge is hilly and the speed at which run off water travels is as much of a concern as the volume. Especially where farmers have removed hedgerows to enlarge fields. Hedgerows create barriers that slow run off and help hold soil in place, instead of in the ditches, and culverts, and sometimes the roadways, when it is washed out through the entrance way to a field. This steepness is what also causes leaves, branches, limbs, and even trees, to sometimes wash down from the woods and cause ditch and culvert blockages.

The Town maintains informal lists/inventories/knowledge of properties that have been flood damaged, but does not make substantial damage estimates. No Town residents have approached the Town with interest in mitigation activities, and the Town is unaware of any ongoing mitigation projects within the town.

Resources

The responsibilities of floodplain administration in the Town of Cambridge currently lies with the Building Code Enforcement Officer. The primary responsibilities of the Town FPA are completing site visits, inspections, etc., and reviewing permits to determine if a development is within the SFHA. There are currently no education or outreach programs to the community regarding flood hazards/risk, and flood risk reduction through NFIP insurance, mitigation, etc.

Compliance History

The community is in good standing with the NFIP. According to NYS DEC, the date of the most recent compliance audit is January 3, 2013.

Regulatory

The Town Flood Damage Prevention ordinance meets, but does not exceed the FEMA and State minimum requirements. The Town Planning Board reviews the location of all subdivisions relative to flood potential.

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.

Planning

Land Use Planning: The Town of Cambridge does not have Zoning, a Comprehensive Plan, or Site Plan Review. There is, however, a Planning Board and a Building Code Enforcement Officer. The Planning Board reviews development and subdivision permit applications, Environmental Assessment Form.



Town codes and planning documents including the Building and Property Regulation and Building and Construction (Regulation Inspection) are available at the Town Clerks office.

With almost no business and a dwindling population, the Town of Cambridge needs to attract, not repel, business and people. In 2008 a Comprehensive Plan was proposed. It was a long and cumbersome document that was not well received by the community, as the majority of residents felt that it was invasive and unnecessary. The proposal created very serious tension in the township between the pro and anti-plan factions. The Town Board and Supervisor of the time were insistent about adopting the plan and only intensified the fight and got themselves voted out of office.

Before the Comprehensive plan proposal was finally put to rest, the friction was so intense and the attendance at Town Board meeting so large, that a police presence was required. The Anti-Plan group significantly outnumbered the plan's supporters. The end result of the Comprehensive Planning effort is that the mere mention of any regulation of this sort is enough to create another uprising. It may be many years, or a generation, before this type of regulation will be considered again. People have lived in this area for a long time, and have done so sensibly, and for the most part, with respect to their neighbors.

Regulatory and Enforcement

Construction Codes, Uniform: The building codes are strictly enforced to make new and renovated buildings as prepared as possible for hazard related incidents. The Town complies with New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code).

Flood Damage Prevention: The Town of Cambridge has a Law pertaining to the building of structures in potential flood areas. Local Law #1 of 1987 promotes the public health, safety, and general welfare of residents and seeks to minimize public and private losses due to flood conditions. It regulates development to promote flood resistant structures and controls the alteration of floodplains to prevent increased vulnerability. During the update of the next flood damage prevention law, the identified floodplain administrator will be updated accordingly.

Sewers: The Town abides by the County-wide Sanitary Code, which protects and regulates its sewage collection and treatment facilities as a matter of public health and environmental safety. It seeks to prohibit the introduction of stormwater, surface, or sub-surface waters into sanitary sewers and to control the quantity and quality of wastes in the sewage system. The Town has no municipal sewer system – all properties are on private systems.

Subdivision of Land: The Town's Planning Board is tasked with subdivision review. The Planning Board pays special attention to ensure that developments mitigate the issues associated natural hazards.

Administrative / Technical

As part of its ongoing operations, the town conducts hazard management programs such as tree trimming, culvert replacement and maintenance, ditch work, road maintenance, and beaver dam removal. The Highway Department operates with the idea of storm damage mitigation as standard procedure. Culverts are always assessed by the Highway Department before replacing, as whether they should be improved upon as far as size, style, or both. Ditches and roadway shoulders are maintained, and tried to be kept clear of debris. The trimming of trees and the cutting of brush along the roadsides is a constant and ongoing process. Still, sometimes debris will wash down out of the woods or fields and cause partial or full blockage of a ditch or culvert.



Roadways, both gravel and black top are kept in good condition. During winter the roads are plowed, and wings are used to keep the snow banks back as far from the driving lanes as possible. A sand and salt mix are applied to the roads. The sand to salt ratio varies to match the weather conditions. There are monetary restraints due to the size of the tax base and budget, but, we do very well with what we have.

Highway department staff have job descriptions that specifically include identifying and/or implementing mitigation projects/actions or other efforts to reduce natural hazard risk. Depending on the extent of damage from an event, local insurance adjusters or the Highway Superintendent can perform Substantial Damage Estimates.

The Town participates in the Association of Towns, a membership which supports natural hazard risk reduction and builds hazard management capabilities.

Town staff would benefit from benefit from additional training and/or certification with respect to natural hazard risk management.

Fiscal

Operating Budget: The Town of Cambridge has a total budget of less than \$1,000,000.00 with a Highway Department working budget of less than \$220,000.00 plus salaries and benefits. The Town has a machinery fund to try to keep trucks and machinery relatively current, and the CHIPS and Pave NY money for paving the roads is about \$185,000.00 for 2016.

The Town Board (also known as the Town Council) is responsible for all legislation, adoption of town budgets, and personnel matters. The Town Supervisor publishes a monthly Supervisors Report listing general town income and expenses. The Town's operating budget contains minimal provisions for expected repairs like snow removal, road salting, brush trimming, and general repairs on Town-owned equipment and facilities. The Town also allots funding to maintain the 64.04 miles of town highways.

Grants: Moneys levied and collected for repair and improvement of highways, and received from the state for the repair and improvement of highways.

Education and Outreach

The Town Website Committee developed www.townofcambridgeny.org as a resource for the local community. Links to Cambridge EMS, and NYS DEC Q&A page on open burning.

Town employees attend local and regional training events, when available, such as NYSERDA training for Planning and Zoning Boards on Planning/Permitting/Zoning for Solar. Town Highway staff gets training or continuing professional education which supports natural hazard risk reduction, and similar trainings are offered at the local schools. The Town budget also includes line items for the Town Clerk and Highway Superintendent to attend annual conferences.

Cambridge is a sensible town, with, for the most part, a resilient population. If a road is temporarily closed for any reason, they know enough to go around and deal with the situation until it is rectified.

9.4.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status





The following table indicates progress on the community's mitigation strategy identified in the 2010 Plan. It should be noted that during the 2010 planning process, only general, countywide actions were identified for each municipality. The Town of Cambridge reviewed the previous actions and selected actions they chose to carry forward as part of this plan update. 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 9.4-11. Status of Previous Mitigation Actions

2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2018 HMP or Discontinue)	Describe Next Step
CR 59 landslide; .25 mile west of Morris Road intersection. Propose major engineered project to stabilize embankment continually eroded by meandering stream at the base of the slope. Figure 121 shows the asphalt patch in road where westbound lane is continually undermined.	County	Complete	This is a County problem, not Town, which they took care of.	Discontinue	N/A
Improve drainage at sites where roads have washed out due to natural hazards in the past	County and NYS DHSES	In Progress	Ongoing	Discontinue – Operational Capability	This is under control. Between culvert improvements, ditch work, and beaver control, we have done much to improve the situation and lessen the adverse impacts. This is not 100 % fool proof and mishaps can still happen, but the attempt is current and ongoing.
Purchase equipment to provide for local personnel to conduct the drainage improvement	County and NYS DHSES	In Progress	New Loader 2013 Purchased excavator in 2008	Discontinue	Ongoing capability
Engineering assessment to determine feasibility of each site improvement	County and NYS DHSES	No Progress	Not applicable to the Town	Discontinue	N/A
Improve dams to prevent flooding causing roads to wash out.	County and NYS DHSES	In Progress	Ripped out beaver dams Other dams are privately owned	Include in 2018 HMP	Attempt to control the beavers
Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.	County and NYS DHSES	In Progress	Ongoing	Discontinue	Ongoing capability





Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Cambridge has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- Ditch work, tree trimming, culvert replacement and maintenance, road maintenance, beaver dam removal
- Bridge on South Union Street – Completed. Involved the Town of Cambridge, Village of Cambridge, and the Town of White Creek

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Cambridge participated in a mitigation action workshop in September 2016, 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 9.4-12 summarizes the comprehensive-range of specific mitigation initiatives the Town of Cambridge 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 9.4-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.4-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Cambridge-1	Conduct engineering study to look at the hydrology and hydraulics of the area, potentially leading to a Flood Management Plan.	Both	Flood, Severe Storm	1, 4, 5	Town Supervisor, SWCD	High	Medium	Municipal Budget/Time	Short Term – less than five years	Medium	LPR	PR
T. Cambridge-2	Evaluate the structural condition of the old McClellan/ Thurber Pond dam by conducting a study and determining next steps.	Existing	Severe Storm, Severe Winter Storm, Flood	1, 4	Town Highway Department, Planning Board	High	Medium	Municipal Budget/Time	Short Term – less than five years	Medium	LPR	PP ES
T. Cambridge-3	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections	Existing	Flood, severe storms	2, 4	Town FPA with support from Washington County	Medium	Low	Municipal Budget/Time	Short Term – less than five years	High	EAP	PR PI
T. Cambridge-4	Send Town staff to county and state trainings, and complete certification programs with respect to hazard risk management in Benefit Cost Analysis (BCA), Recovery Planning, Damage Estimates, and Debris Management.	N/A	All Hazards	2, 4	Town Highway Department, Town FPA, Code Enforcement with support from Washington County	Medium	Low – Staff Time	FEMA (HMGP, FMA, PDM), CDBG, Municipal Budget/Time	Ongoing	Medium	LPR EAP	PI
T. Cambridge-5 (previous action)	Develop and implement a plan to collaborate with private property owners to reduce risks from beaver dams and prevent flooding causing roads to wash out.	Existing	Flood	2, 3, 5	Town Highway with support from Washington County Public Works	Low	Low	Municipal Budget/Time	Short Term – less than five years	Medium	LPR NSP	PR, NR
T. Cambridge-6 (previous action)	Slope Stabilization - Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage. • Pettey’s Road	N/A	Flood, Severe Storm, Landslide	1, 4, 5	Town Highway with support from Washington County Public Works	High	Medium	Municipal Budget, SWCD, WQIP	Short Term – less than five years	Medium	SIP NSP	PP NR





Table 9.4-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	• Dickensen Road											

Notes:

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

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

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management
SWCD	Soil & Water Conservation District
WQIP	Water Quality Improvement Project Grant

Potential FEMA HMA Funding Sources:

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

Timeline:

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

Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High	Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:





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

CRS Category:

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



Table 9.4-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
T. Cambridge-1	Secure funding for an engineering study to look at the hydrology and hydraulics of the area, potentially leading to a Flood Management Plan.	1	1	1	1	0	0	0	1	0	1	1	0	1	0	8	Medium
T. Cambridge-2	Evaluate the structural condition of the old McClellan/ Thurber Pond dam.	1	1	1	1	0	0	0	1	0	1	1	0	1	0	8	Medium
T. Cambridge-3	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections	1	1	1	1	1	0	1	1	0	1	1	1	0	0	10	High
T. Cambridge-4	Send Town staff to county and state trainings, and complete certification programs with respect to hazard risk management in Benefit Cost Analysis (BCA), Recovery Planning, Damage Estimates, and Debris Management.	1	1	1	1	0	0	0	0	0	1	1	1	0	0	7	Medium
T. Cambridge-5	Develop and implement a plan to collaborate with private property owners to reduce risks from beaver dams and prevent flooding causing roads to wash out.	1	1	1	1	0	0	1	1	1	1	0	1	0	0	9	Medium
T. Cambridge-6	Slope Stabilization - Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.	0	1	1	1	0	1	1	1	0	1	1	1	0	0	9	Medium





Table 9.4-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	<ul style="list-style-type: none"> Petty's Road Dickensen Road 																

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



9.4.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.4.8 Hazard Area Extent and Location

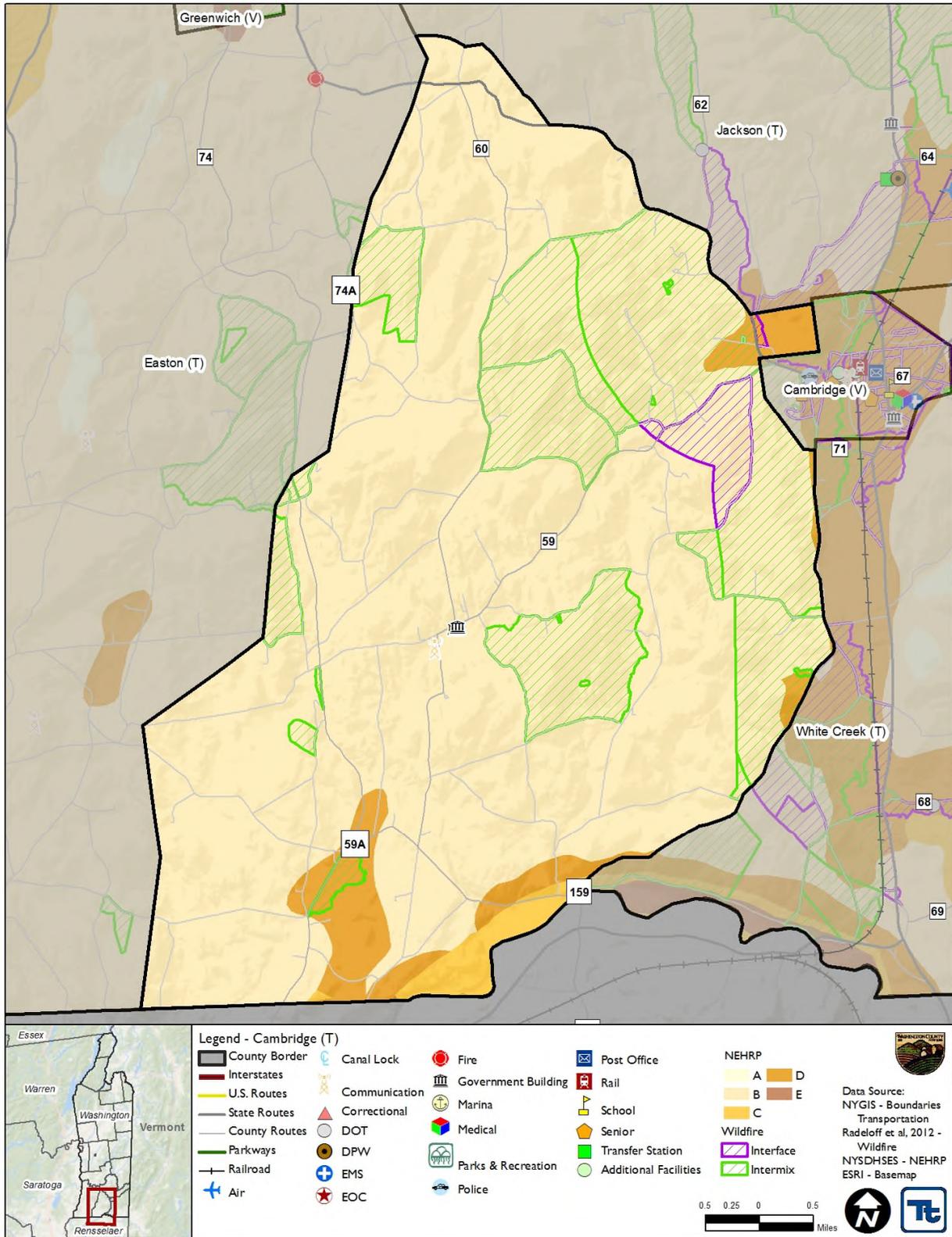
Hazard area extent and location maps have been generated for the Town of Cambridge that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Cambridge has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.4.9 Additional Comments

None at this time.



Figure 9.4-1. Town of Cambridge Hazard Area Extent and Location





Action Number:

T. Cambridge-1

Mitigation Action Name:

Conduct an engineering study.

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Lack of understanding of the hydrology and hydraulics of the area, which leads to a lack of understanding about the floodplain.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action - Current problem persists. Coordinate with neighboring towns to run regional study of floodplain – may not be detailed enough to eventually write Flood Management Plan specific to Town of Cambridge.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Conducting an engineering study to help determine the extent and severity of the floodplain and potential flood events.
Mitigation Action Type	Local Plans and Regulations (LPR)
Goals Met	Goal 1: Protect Life and Property Goal 4: Provide for Emergency Services Goal 5: Encourage the development and implementation of long-term, cost-effective, and resilient mitigation projects to preserve or restore the functions of natural systems.
Applies to existing and or new development, or not applicable	Both
Benefits (losses avoided)	High
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Supervisor, County Soil & Water Conservation District
Local Planning Mechanism	Hazard Mitigation
Potential Funding Sources	Town Budget
Timeline for Completion	Short Term – less than five years
Reporting on Progress	
Date of Status Report/ Report of Progress	No progress; new project



Action Number: T. Cambridge-1
 Mitigation Action Name: Secure funding for an engineering study.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Grant funding where available; municipal budget
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	Once funding is obtained, project will take less than five years
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (H/M/L)	Medium	



Action Number:

T. Cambridge-2

Mitigation Action Name:

Evaluate the structural condition of the old McClellan/Thurber Pond dam.

Assessing the Risk	
Hazard(s) addressed:	Severe Storm, Severe Winter Storm, Flood
Specific problem being mitigated:	The aging dam could have lost structural integrity since its construction; risk of dam failure and inundation of surrounding areas.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action - Current problem persists. Replace McClellan/Thurber dam – cost.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Evaluate the structural condition of the old McClellan/ Thurber Pond dam by conducting a study and determining next steps.
Mitigation Action Type	Local Plans and Regulations (LPR)
Goals Met	Goal 1: Protect Life and Property Goal 4: Provide for Emergency Services
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Highway Department, Planning Board
Local Planning Mechanism	Hazard Mitigation
Potential Funding Sources	Municipal Budget/Time
Timeline for Completion	Short Term – less than five years
Reporting on Progress	
Date of Status Report/ Report of Progress	No progress; new project



Action Number: T. Cambridge-2
 Mitigation Action Name: Evaluate the structural condition of the old McClellan/Thurber Pond dam.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Municipal budget
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Severe Storm, Winter Storm, Flood
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (H/M/L)	Medium	



Action Number:

T. Cambridge-3

Mitigation Action Name:

Provide continuing education and training for local Floodplain Administrator.

Assessing the Risk	
Hazard(s) addressed:	Flood, severe storms
Specific problem being mitigated:	Staff members have not been formally trained on Floodplain Administration.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action - Current problem persists. Provide training for a staff member other than local Floodplain Administrator – not preferred, Floodplain Administrator needs to have skillset necessary to run successful Floodplain Administration program
Action/Project Intended for Implementation	
Description of Selected Action/Project	Provide continuing education and training for local Floodplain Administrator to ensure code enforcement and proper inspections. Allow for local staff members to attend trainings and conferences to become educated on how to efficiently run a local Floodplain Administration program
Mitigation Action Type	Education and Awareness Programs (EAP)
Goals Met	Goal 2: Increase Public Awareness Goal 4: Provide for Emergency Services
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	Low
Priority*	High
Plan for Implementation	
Responsible Organization	Town FPA with support from Washington County
Local Planning Mechanism	Hazard Mitigation
Potential Funding Sources	Municipal Budget/Time
Timeline for Completion	Short Term – less than five years
Reporting on Progress	
Date of Status Report/ Report of Progress	No progress; new project



Action Number: T. Cambridge-3
 Mitigation Action Name: Provide continuing education and training for local Floodplain Administrator.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	
Fiscal	1	Municipal budget and staff time
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
Total	10	
Priority (H/M/L)	High	



Action Number:

T. Cambridge-4

Mitigation Action Name:

Send Town staff to county and state trainings and complete certification programs.

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Staff members have not been formally trained in these fields.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action - Current problem persists. Hire outside groups and certification programs to come to Town and educated and train Town Staff – cost.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Send Town staff to county and state trainings, and complete certification programs with respect to hazard risk management in Benefit Cost Analysis (BCA), Recovery Planning, Damage Estimates, and Debris Management. Certifications and trainings for hazard risk management will allow for staff members to properly address hazards of concern and mitigation opportunities.
Mitigation Action Type	Local Plans and Regulations (LPR) Education and Awareness Programs (EAP)
Goals Met	Goal 2: Increase Public Awareness Goal 4: Provide for Emergency Services
Applies to existing and or new development, or not applicable	N/A
Benefits (losses avoided)	Medium
Estimated Cost	Low – Staff Time
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Highway Department, Town FPA, Code Enforcement with support from Washington County
Local Planning Mechanism	Hazard Mitigation
Potential Funding Sources	FEMA (HMGP, FMA, PDM), Community Development Block Grant, Municipal Budget/Time
Timeline for Completion	Ongoing
Reporting on Progress	
Date of Status Report/ Report of Progress	No progress; new project



Action Number: T. Cambridge-4
Mitigation Action Name: Send Town staff to county and state trainings, and complete certification programs.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Need to secure grant funding
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
Total	7	
Priority (H/M/L)	Medium	



Action Number:

T. Cambridge-5

Mitigation Action Name:

Develop and implement a plan to collaborate with private property owners

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Beaver dams are often subject to failure, which causes flooding in the surrounding area. Beaver dams on public property have been removed, but other dams are located on privately owned property.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action - Current problem persists. Move roadways that are prone to wash out – not feasible
Action/Project Intended for Implementation	
Description of Selected Action/Project	Develop and implement a plan to collaborate with private property owners to reduce risks from beaver dams and prevent flooding causing roads to wash out.
Mitigation Action Type	Local Plans and Regulations (LPR) Natural Systems Protection (NSP)
Goals Met	Goal 2: Increase Public Awareness Goal 3: Encourage Partnerships Goal 5: Encourage the development and implementation of long-term, cost-effective, and resilient mitigation projects to preserve or restore the functions of natural systems.
Applies to existing and or new development, or not applicable	Existing
Benefits (losses avoided)	Low
Estimated Cost	Municipal Budget/Time
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Highway with support from Washington County Public Works
Local Planning Mechanism	Hazard Mitigation
Potential Funding Sources	Municipal Budget/Time
Timeline for Completion	Short Term – less than five years
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 6/01/2017 Progress on Action/Project: Dams on public property have been removed.



Action Number:
Mitigation Action Name:

T. Cambridge-5
Develop and implement a plan to collaborate with private property owners

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Work with residents to protect themselves and their property from flooding caused by beaver dams
Property Protection	1	Work with residents to protect themselves and their property from flooding caused by beaver dams
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	1	Town staff and budget
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
Total	9	
Priority (H/M/L)	Medium	



Action Number:

T. Cambridge-6

Mitigation Action Name:

Slope Stabilization at Pettey's Road and Dickensen

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm, Landslide
Specific problem being mitigated:	The Town of Cambridge is hilly and the speed at which run off water travels is as much of a concern as the volume, especially where farmers have removed hedgerows to enlarge fields. Hedgerows create barriers that slow run off and help hold soil in place, instead of in the ditches, culverts, and roadways, when it is washed out through the entrance way to a field. This steepness is what also causes leaves, branches, limbs, and even trees, to sometimes wash down from the woods and cause ditch and culvert blockages.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	Pettey's Road - outlawing of ATV's, the family moving away, or do nothing. Currently, do nothing option is most feasible. Dickensen Road – Support embankment with concrete, soil, and sod. Raise the roadway a little more each year with the application of layers of gravel. Make culvert both larger and longer. The latter option may happen at a later date.
Action/Project Intended for Implementation	
Description of Selected Action/Project	<ol style="list-style-type: none"> 1. Pettey's Road. A family that insists upon riding their ATV's up and down the bank by their house which denudes and loosens the soil, causing it to slide into the ditch and at times partially across the road. The only solution to this is the outlawing of ATV's or the family moving away. 2. Dickensen Road. Dickensen Rd. is a gravel road. Runoff to a low spot in the road has caused the erosion of the shoulder of the road and the embankment all the way down to the culvert (about 18 ft.). This bank has washed away several times. This summer the Town stacked layers of old concrete slabs into the bank and filled over with soil and sod, which will hopefully settle and set before a really heavy rain for the layers of old concrete to withstand the erosion. This low area in the road has already been raised about as much as is practical. and slowly over the years the plan is to raise the elevation a little more with the application of layers of gravel. When this culvert needs to be replaced, the Town will consider making it both larger and longer, which will allow for the raising of the road even more.
Mitigation Action Type	Structure and Infrastructure Project (SIP) Natural Systems Protection (NSP)
Goals Met	Goal 1: Protect Life and Property Goal 4: Provide for Emergency Services
Applies to existing and or new development, or not applicable	N/A
Benefits (losses avoided)	High – reduce risk of land subsidence, and improve public safety
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Town Highway with support from Washington County Public Works
Local Planning Mechanism	N/A



Potential Funding Sources	Municipal Budget, County Soil & Water Conservation District, Water Quality Improvement Project Grants
Timeline for Completion	Short (1 to 5 years)
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: T. Cambridge-6

Mitigation Action Name: Drainage Improvements.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Arrest the erosion of the shoulder of the road and the embankment
Cost-Effectiveness	1	Risk of future losses to areas above and beneath the slopes are greater than the cost to implement the project.
Technical	1	The project is technically feasible.
Political	0	
Legal	1	The Town has legal jurisdiction over the physical project location.
Fiscal	1	Project can be funded under existing program budgets.
Environmental	1	Project will preserve or restore the functions of natural slope.
Social	0	No known social impacts
Administrative	1	Town has administrative capability to manage the work
Multi-Hazard	1	Flood, Severe Storm, Landslide
Timeline	1	Can be completed within 5 years
Agency Champion	0	
Other Community Objectives	0	
Total	9	
Priority (High, Medium, or Low)	Medium	