







WESTFORD, VT**ANNEX 16: TOWN OF WESTFORD**

	Chartered: 1763
	Land Area: 39.3 sq. mi.
	2020 Population: 2,144
	Government Address: 1713 Vermont Route 128, Westford, Vermont 05494
	Households: 814
	Mitigation Focus: Severe Winter Storm, Flooding, Fluvial Erosion

This section presents the jurisdictional annex for Town of Westford, which provided the following information for the 2022 update to the *Chittenden County, Vermont Multi-Jurisdictional All Hazards Mitigation Plan*:

- Jurisdiction Information (Contact Information and Hazard Mitigation Planning Role)
- Jurisdiction Planning Process
- Hazard Event History
- Hazard Risk Ranking

- Community Assets
- Capabilities Assessment
- Resiliency to Hazards
- Mitigation Actions and Action Plan for Implementation

16.1 HAZARD MITIGATION PLAN – POINT OF CONTACT

Type	Primary Point of Contact	Secondary Point of Contact
Name	Harnony Cism	Joshua Smith
Title	Zoning Administrator	EMD Coordinator
Agency	Town of Westford	Town of Westford
Address	1713 Vermont Route 128	1713 Vermont Route 128
City, State, Zip	Westford, Vermont 05494	Westford, Vermont 05494
Phone	802-878-4587	339-203-2402
Email	zoning_admin@westfordvt.us	sgtjoshuasmith@gmail.com

16.2 JURISDICTION PROFILE

- Geographic Region: Champlain Valley, Green Mountains
- Persons per household: 2.63
- Persons per Square mile:
- Median Age: 41.5
- Elevations: Near sea level- 472ft

Location

Westford is in northern Chittenden County, bordered by Franklin and Lamoille counties to the north. According to the United States Census Bureau, the town has a total area of 39.3 square miles, of which 39.1 square miles is land and 0.19 square miles, or 0.53 percent, is water. Prominent waterways include Westford Pond, Pond Brook, Rogers Brook, and the Browns River (on the east), as well as Morgan Brook (in the town's center) and Beaver Brook (in the northeast, near Cloverdale).

History

The original charter for the Town of Westford was granted by New Hampshire's provisional governor Benning Wentworth on June 8, 1763 as part of a series of what came to be known as New Hampshire Grants. According to Wentworth's grant, six lots were set aside (three for religious use, one for the town's school, and two for Wentworth himself) and the remainder of the land was subdivided among the founding residents. Although officially granted simultaneously with Underhill and Mansfield, the description of Westford's territory is recognized as having been set down earlier due to the fact that its territorial boundaries are defined in relation to Westford's. From their founding, both Westford and Underhill shared many of the same grantees, and settlement between the two towns occurred in concert.

Demographics, Economy, and Governance

The Town of Westford's population has steadily increased over the past several decades, showing significant growth.

Table 16.1: Demographics, Economy, and Governance in Town of Westford

Demographics	Economy	Governance
Population Growth <ul style="list-style-type: none"> 1980: 1,413 1990: 1,740 2000: 2,086 2010: 2,029 2020: 2,144 2020-2030 (Projected): Race and Ethnicity Percentage of population identifying as: <ul style="list-style-type: none"> White: Asian/Pacific Islander: Hispanic/Latino: Two or more races: Black/African American: American Indian: 	<ul style="list-style-type: none"> Median household income (2019): \$104,729 Per capita income (2019): \$47,590 Median home value (2021): Number of Single Unit Residences: Population below poverty level (2019): 	<ul style="list-style-type: none"> City Council City Manager City Council Clerk

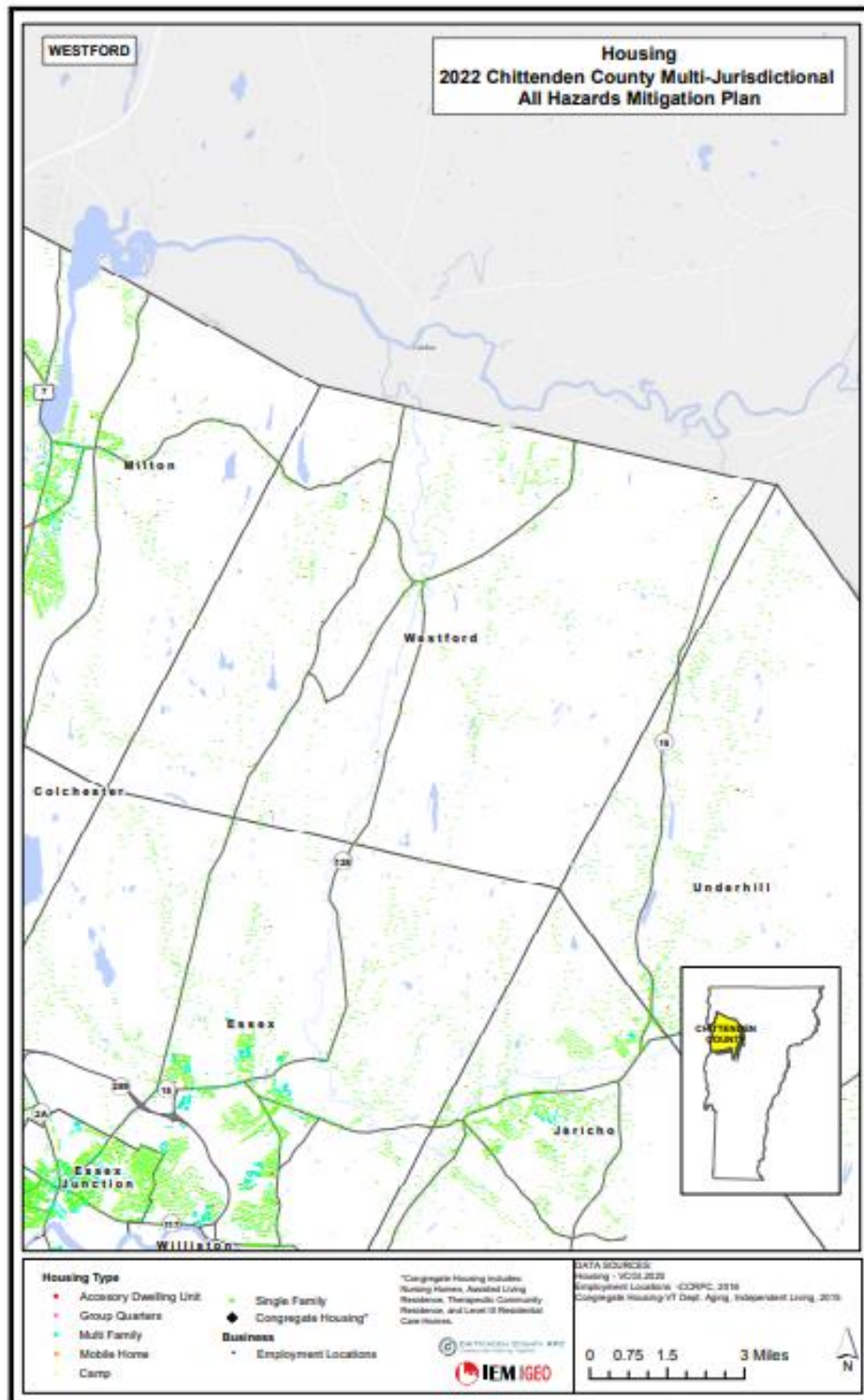


Figure 16.1: Housing and Employment, Town of Westford ¹

¹ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

Built Environment and Community Lifelines

Population concentrations in the town of Westford occur in the village center, along VT 15 in the northeast corner of town, around Cambridge Rd. and Plains Rd. on the north border, and along Old Stage Rd. and the Westford-Milton Rd west of the village. With the exception of limited commercial development and municipal buildings along VT 128 and VT 15, and in the small village area, the overwhelming use of the landscape in Westford is for large-lot residential and agricultural purposes.

The Town of Westford identified eleven Community Lifelines/critical assets within the town.

Table 16.2: Number of Community Lifelines and Critical Assets in Town of Westford

SECTOR	Safety and Security	Food, Water, Shelter	Health and Medical	Energy	Communications	Transportation	Hazardous Materials	Education	Cultural/ Historical	High Hazard Dams
No. Assets	4	2	2	1	0	1	0	1	0	0

Safety and Security

There is one fire station located in the Town of Westford.

Food, Water, Shelter

There are two public shelters located in the Town of Westford.

Health and Medical

There are no health and medical facilities located in the Town of Westford.

Energy

There are no energy facilities located in the Town of Westford.

Communications

Most communications and information systems and infrastructure in the United States are privately-owned; however, the Town maintains authority and control over public safety communications for fire, police, and other responding agencies. In recent years, the Federal government has taken a stronger role in protecting information and communications infrastructure, which may also present a challenge in relation to disaster impacts. Increasing reliance on this infrastructure by individuals, businesses, and government could cause vulnerabilities which emergency managers should take into consideration in pre-and post-incident planning and operations.

Transportation

There are no transportation facilities located in the Town of Westford.

Hazardous Materials

According to the Hazus database, there are no hazardous materials facilities or storage sites located in the town.

Education

There is one kindergarten to grade twelve educational facility and one public school located in the Town of Westford.

Recreational, Cultural and Historic Sites and Assets

The Browns River Covered Bridge is a major historical site is located in the Town of Westford.

Natural Environment

The natural environment is mainly grass/shrubs and tree canopy, with some dense urban areas near the south portion of the town boundaries.

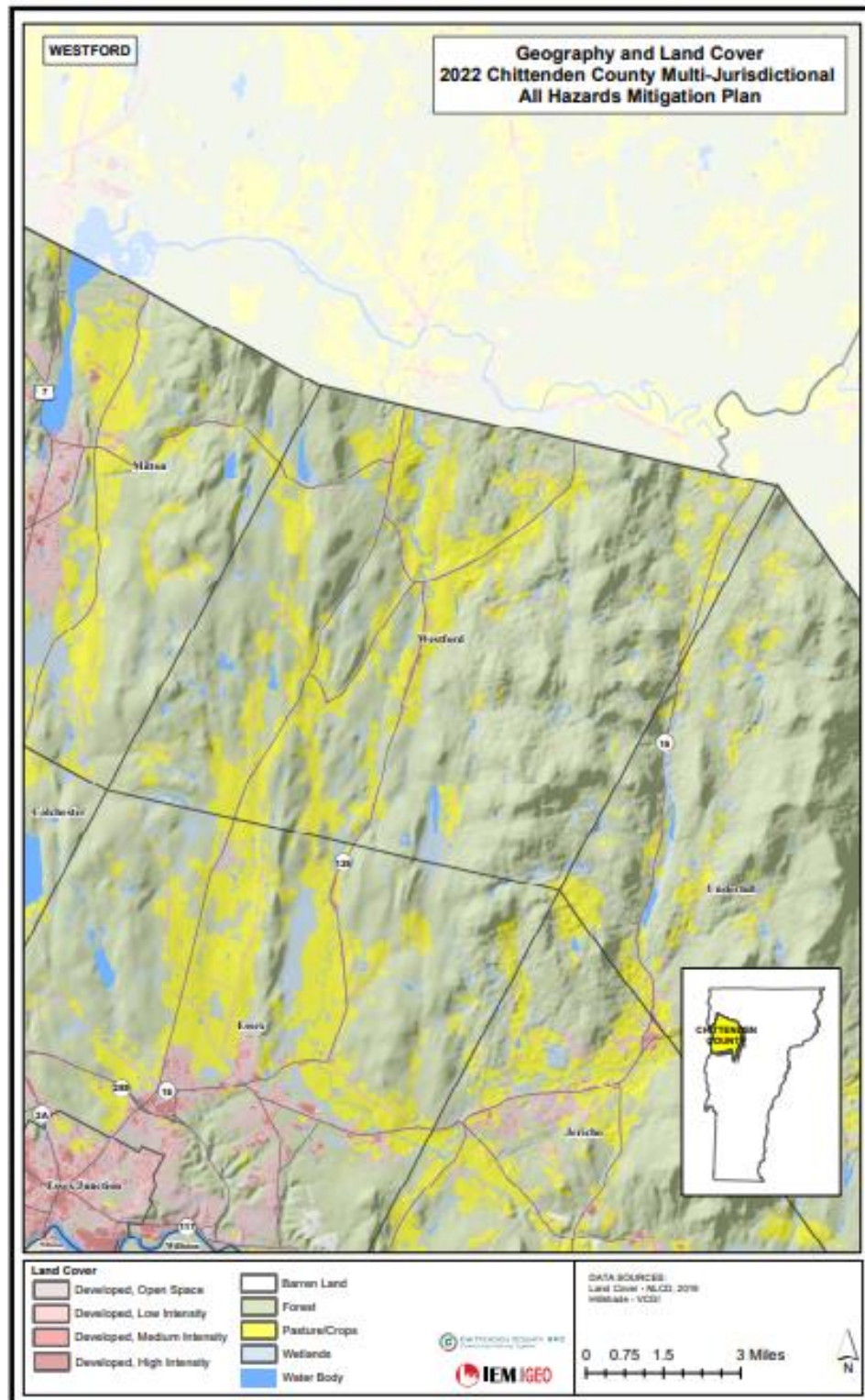


Figure 16.2: Geography and Land Cover, Town of Westford²

² Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

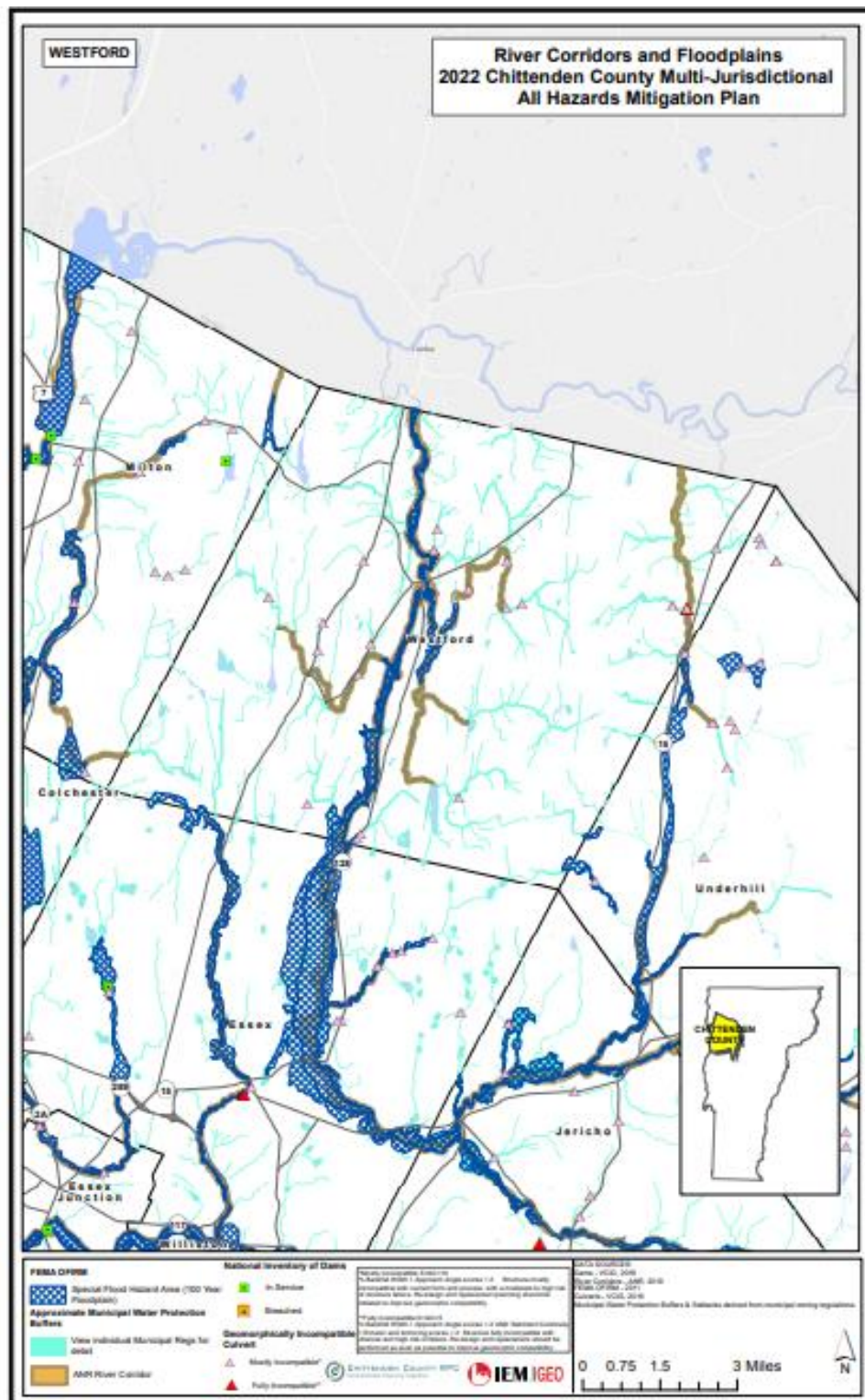


Figure 16.3: River Corridors and Floodplains, Town of Westford³

³ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

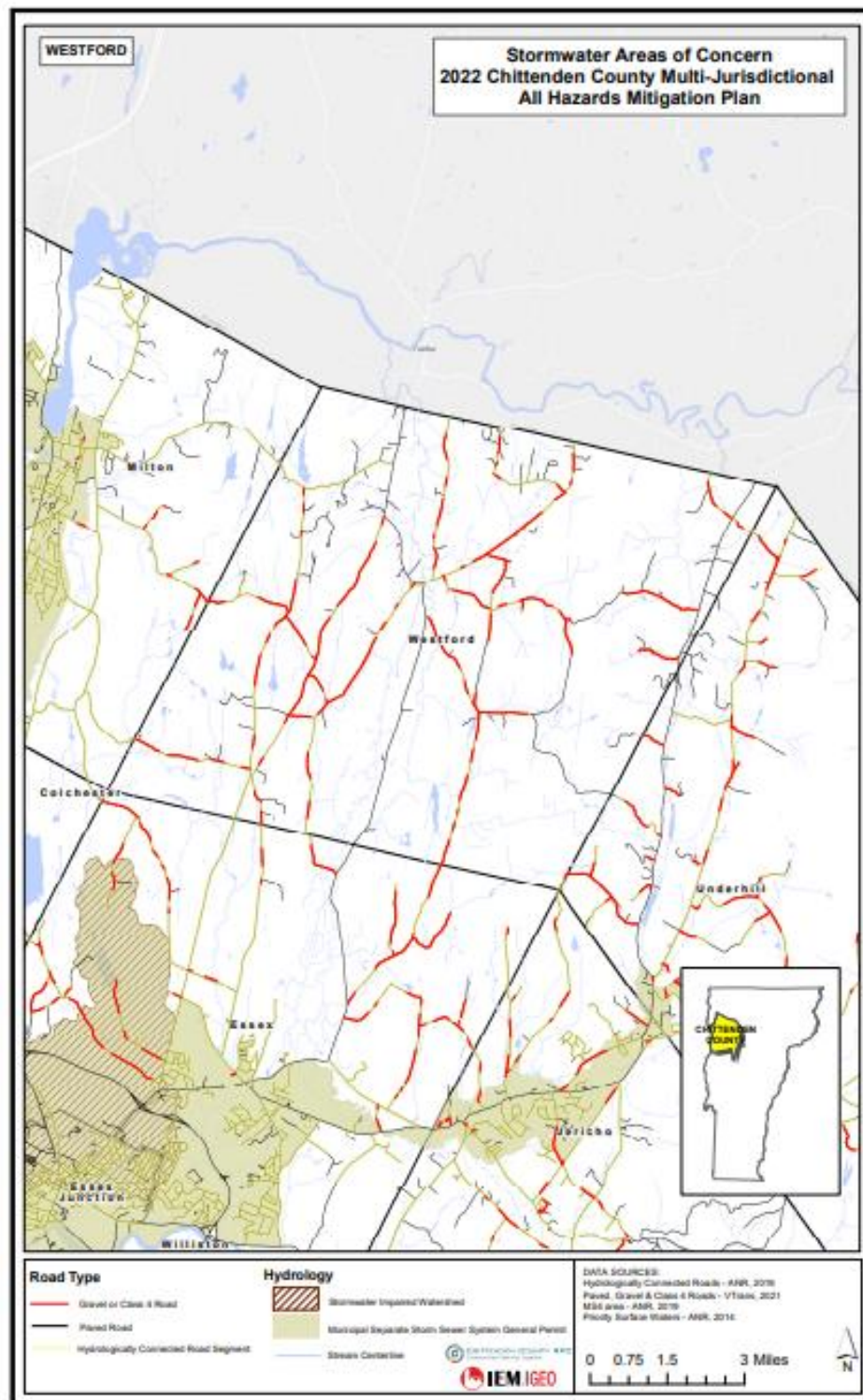


Figure 16.4: Hydrology and Stormwater Management Lines, Town of Westford⁴

⁴ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

Growth and Development Trends

There are a handful of conserved parcels in Westford. Most parcels have been conserved for their scenic, agricultural, or natural resource values. In March 2004, the Town of Westford created a fund for use in land conservation or open space purchases. To date, the fund only receives donations, not municipal funds. The rising price of land in Westford may slow the rate of land conservation; however, there is a strong degree of public support for land conservation among the town's residents.

The town has 539 acres conserved as part of Planned Use Developments. This space is conserved for recreational use or natural resource protection, such as agriculture or silviculture. Additionally, the Town's zoning bylaws include both a Water Resources Overlay District and a Floodplain District which preclude the construction of new homes or businesses and effectively act as conserved lands.

Table 16.3: Population Trends, 2010-2020, Town of Westford

2010 Population	2020 Population	Net Change 2010-2020	% Change 2010-2020
2,029	2,062	33	1.62%

Table 16.4: Westford Population Projections, 2020 to 2030, Town of Westford

2020 Population	2030 Population	Net Change 2020 -2030	Percent Change 2020-2030
2,062	2,225	163	7.9%

At present and for the foreseeable future the current development pattern will continue: some residential and commercial growth in the Village District and continued, dispersed residential growth on five and ten acre lots in the Agriculture/Forestry/Residential districts. At this time, the main way CCRPC has to predict future development is by analysis of municipal zoning bylaws. As the municipality participates in the National Flood Insurance Program (NFIP), zoning bylaws heavily regulate development in designated flood hazard areas. As a result, little to no development is likely to take place in flood hazard areas. These zoning requirements mitigate flood hazards to future structures.

Additionally, the Town also regulates development near other waterbodies and wetlands. As a result, little to no development is likely to take place in flood hazard areas or river corridor protection areas. These zoning requirements effectively mitigate damages from Flood and Fluvial Erosion hazards to future structures. Additionally, through at least 2027, there is no known or projected development of new buildings or infrastructure anticipated to be constructed in areas known to be particularly vulnerable to natural hazards.

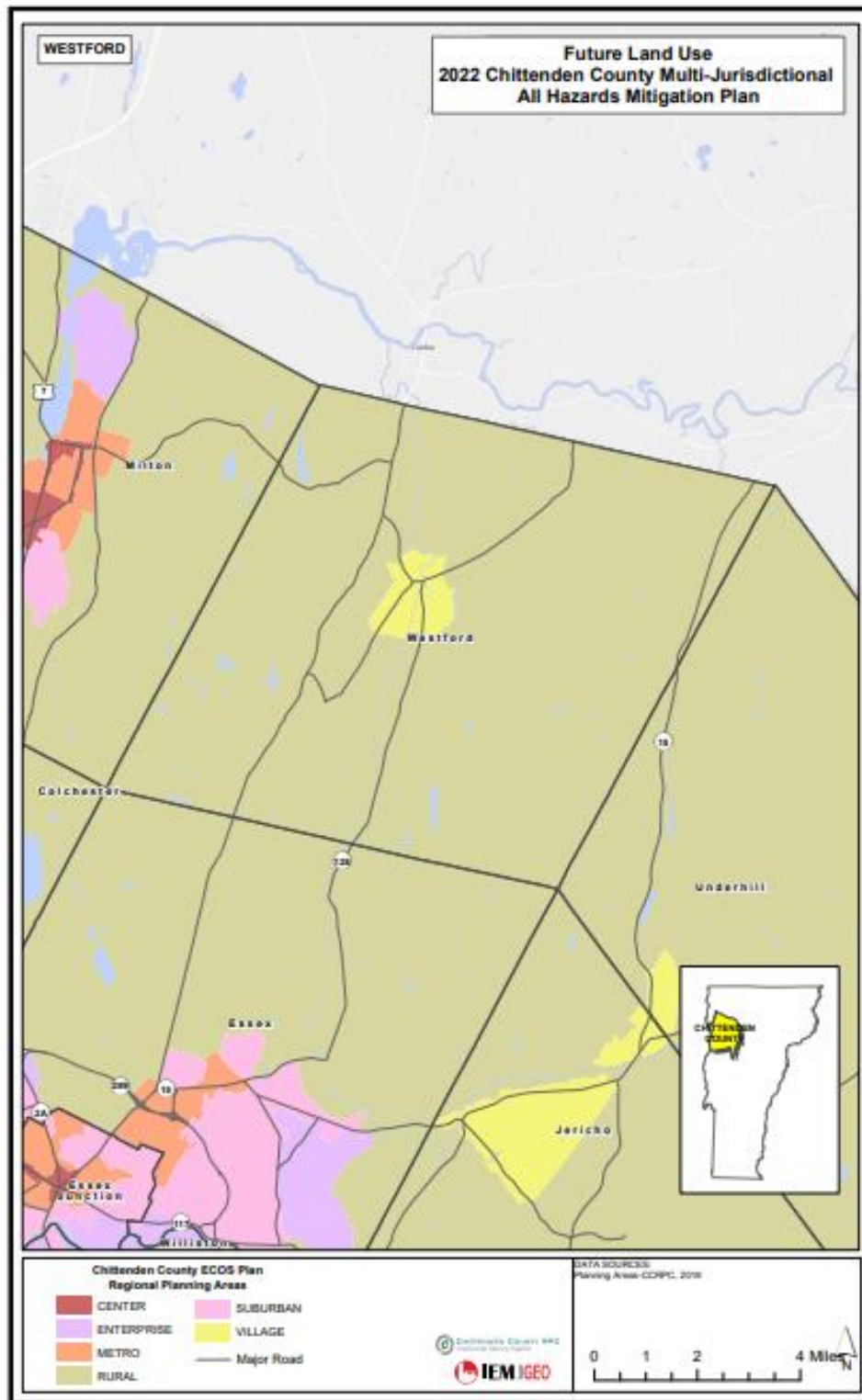


Figure 16.5: Future Land Use, Town of Westford⁵

⁵ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

16.3 JURISDICTION PLANNING PROCESS

Table 16.5: Points of Contact for Hazard Mitigation Planning, Town of Westford

Name	Position/Title	Department/Agency
Harmony Cism	Zoning Administrator	Town of Westford
Joshua Smith	EMD Coordinator	Town of Westford
Dan Albrecht	Senior Planner	Chittenden County RPC

The jurisdiction identified its chief hazard mitigation planning responsibility as participating in the planning process and providing data and information through the Chittenden County All Hazards Mitigation Plan Update Committee. The county also identified the following tasks as part of its mitigation planning responsibilities:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Jurisdictional Planning Committee • Planning Group resource/subject matter expert • Hazard risk and vulnerability assessment • Provide technical data and hazard information • Capabilities assessment • Mitigation strategy development | <ul style="list-style-type: none"> • Sponsor mitigation actions • Review Plan drafts and provide input • Public outreach activities • Implement the Plan • Maintain the Plan |
|---|---|

Public Participation

Several opportunities for public involvement were provided during the planning process, including a Public Hazard Survey and access to the draft plan for review and input.

The Public Hazard Survey was released through a web link posted on the Chittenden County Regional Planning Commission's (CCRPC) "Front Porch" e-newsletter.

In addition to the survey, the public was offered the opportunity to review and provide input to the Draft 2022 Plan update. Notification of the Draft Plan release was made through the same county web link. Documentation of the public survey and draft plan review is included in **Attachment 3** of this annex.

16.4 JURISDICTION-SPECIFIC HAZARD EVENT HISTORY

The Town of Westford has been included in fourteen Federal Disaster or Emergency Declarations since 1990, all but four as a result of flooding.

Table 16.6: Federal Disaster and Emergency Declarations (1990-2021), Town of Westford

Declaration	Date	Hazard	Assistance Type
EM 3567	August 2021	Tropical Storm Henri	P(B)
DR-4532	April 2020	Vermont Covid-19 Pandemic	IA, PA(B)
EM-3437	March 2020	Vermont Covid-19	PA(B)

Declaration	Date	Hazard	Assistance Type
DR-4474	January 2020	Severe Storm and Flooding	PA- (A-G)
DR-4380	May 2018	Severe Storm and Flooding	PA (A-G)
DR 4232	June 2015	Severe Storm and Flooding	PA (A-G)
DR 4163	January 2014	Severe Winter Storm	PA (A-G)
DR 4140	August 2013	Severe Storms and Flooding	PA (A-G)
DR 4022	September 2011	Tropical Storm Irene	IA, PA(A-G)
DR 1995	June 2011	Severe Storms and Flooding	IA, PA(A-G)
EM 3167	April 2001	Snowstorm	PA(B)
DR 1228	July 1998	Severe Storms and Flooding	IA, PA(A-G)
DR 1101	January 1996	Ice Jams and Flooding	PA(A-G)
DR 875	June 1990	Flooding	PA(A-G)

Table 16.7: Summary of Storm Events in the Town of Westford 1950-2021

Event Type	Number of incidents	Direct Deaths	Indirect Deaths	Direct Injuries	Indirect Injuries	Property Damage (\$)	Crop Damage (\$)
Cold/Wind Chill	10	0	0	0	0	100,000	0
Extreme Cold/Wind Chill	5	0	0	0	0	0	0
Flash Flood	2	0	0	0	0	15,000	0
Flood	11	0	0	0	0	168,000	0
Frost/Freeze	3	0	0	0	0	0	275,000
Hail	9	0	0	0	0	70,000	70,000
Heat	7	1	0	0	0	0	250,000
Heavy Rain	6	0	0	0	0	50,000	0
Heavy Snow	5	0	0	0	0	247,000	0
High Wind	14	0	0	1	0	1,440,000	0
Ice Storm	1	0	0	0	0	750,000	0
Lakeshore Flood	5	0	0	0	0	5,520,000	0
Lightning	3	0	0	0	0	60,000	0
Strong Wind	30	1	0	0	0	369,000	0
Thunderstorm Wind	9	0	0	0	0	165,000	0
Winter Storm	68	0	0	2	0	1,758,000	10,000
Winter Weather	97	1	3	0	0	951,000	0
Total	285	3	3	3	0	\$11,663,000	\$605,000

Table 16.8: Significant Hazard Events Identified by Town of Westford, 2017-2021

Date	Hazard	Event and Description
June 18, 2017	Thunderstorm Wind	A pre-frontal trough moved across NY into VT in a moderately unstable air mass during the evening hours of June 18th. A broken line of showers and thunderstorms moved into VT from NY with some isolated wind damage as the storms moved across the northern Champlain Valley.
May 4, 2018	Thunderstorm Wind	An energetic storm system moved from the Great Lakes across the St. Lawrence Valley into Ontario/Quebec during the afternoon and evening hours of May 4th. Instability was marginal for thunderstorm development during the evening hours with thunderstorms ahead of a cold front. However, winds were unseasonably strong in the atmosphere, accounting for some thunderstorms to produce damaging winds and there was some localized damage in non-thunderstorm winds accompanying the arrival of colder air. Very brief heavy rainfall of up to 2 inches in less than an hour accounted for localized flash flooding and a mudslide. Strong winds and a lake level at/above flood stage caused for 4-to-6-foot waves to batter a causeway between Colchester and Grand Isle on Lake Champlain, resulting in numerous washouts and a closure of the causeway.
May 29, 2020	Thunderstorm Wind	A pre-frontal trough moved into seasonable warm, humid and unstable air during the afternoon of May 29th. Multiple rounds of thunderstorms, some multi cell clusters and some discreet moved across NY into VT. These thunderstorms contained strong to damaging winds and brief torrential rainfall.

High Hazards of Concern to the Jurisdiction

The Town of Westford indicated that Severe Winter Storm, Human Infectious Disease, and Severe Rainstorm were the highest natural hazards of concern for the jurisdiction. These hazards are fully profiled in [Section 4, Base Plan](#); however, further information was provided by the town in relation to the following hazards.

Dam/Levee Failure

There are no high- or significant-hazard dams in the Town of Westford.

Severe Winter Storms

Severe winter storms are not formally analyzed or mapped for the Town due to the random nature of where such damage occurs; however, these events do occur with some frequency and are addressed in [Section 4.8, Base Plan](#).

Flood Hazard Areas

Westford's most recent Zoning Regulations, adopted in 2016, designate a Water Resources Overlay District for the area 100 feet from top-of-bank along the Browns River and 50 or 100 feet

from the center of all named and unnamed streams, ponds and lakes shown on the Town Plan Water Resources, Wetlands & Floodplains map. Only uses such as low impact recreation, agriculture, forestry, open land maintenance, maintenance of man-made ponds, invasive species control, and wastewater and potable water systems are permitted within the overlay district.

A simple GIS intersection analysis reveals that portions of town roads are also located within the 100-year floodplain as well as culverts, bridges and utility poles. Unfortunately, this level of analysis does not take into account the fluvial geomorphology (volume, velocity, direction, etc.) nor, most critically, does it factor in the elevation of the road relative to flood elevation. Analysis also reveals farmland located within the floodplain, however, without detailed studies at each location it is not currently possible to predict how many cubic yards of productive soils would be a net loss during a flood event.

No systematic data is collected on river flow in Westford. The only systematic data on river flow in Chittenden County is collected on the Winooski River at a gauge straddling South Burlington and Essex Junction. While the data has been collected since the massive 1927 flood, once dams were constructed by the mid-1930s, water flows became more tightly regulated for flood control and electricity generation and therefore recorded peak flows may not accurately measure total rainfall or total discharge.

Fluvial Erosion Hazard and River Corridor Areas

Stream Geomorphic Analysis (SGA) work has been completed on the Browns River, portions of Rogers Brook, and portions of Morgan Brook in Westford. Phase 2 SGA based River Corridor Protection Areas (formerly Fluvial Erosion Hazard Areas) were developed for those portions of streams where SGA was completed. Additional portions of Rogers Brook and Morgan Brook that did not have Phase 2 SGA work but have a watershed area greater than two sq. miles, would also be included in the River Corridor Protection Area and/or River Corridor.

Human Infectious Disease

This hazard was included as the societal hazard, “pandemic” in the 2017 Plan, but has been moved to the natural hazard section for the 2022 update, due to the recent worldwide COVID-19 pandemic and the widespread impacts to the population and the economy. The Town of Westford has maintained coordination with the Vermont Department of Health for preparedness/prevention, response, recovery and mitigation information and guidance and will continue this relationship going forward into the next planning cycle.

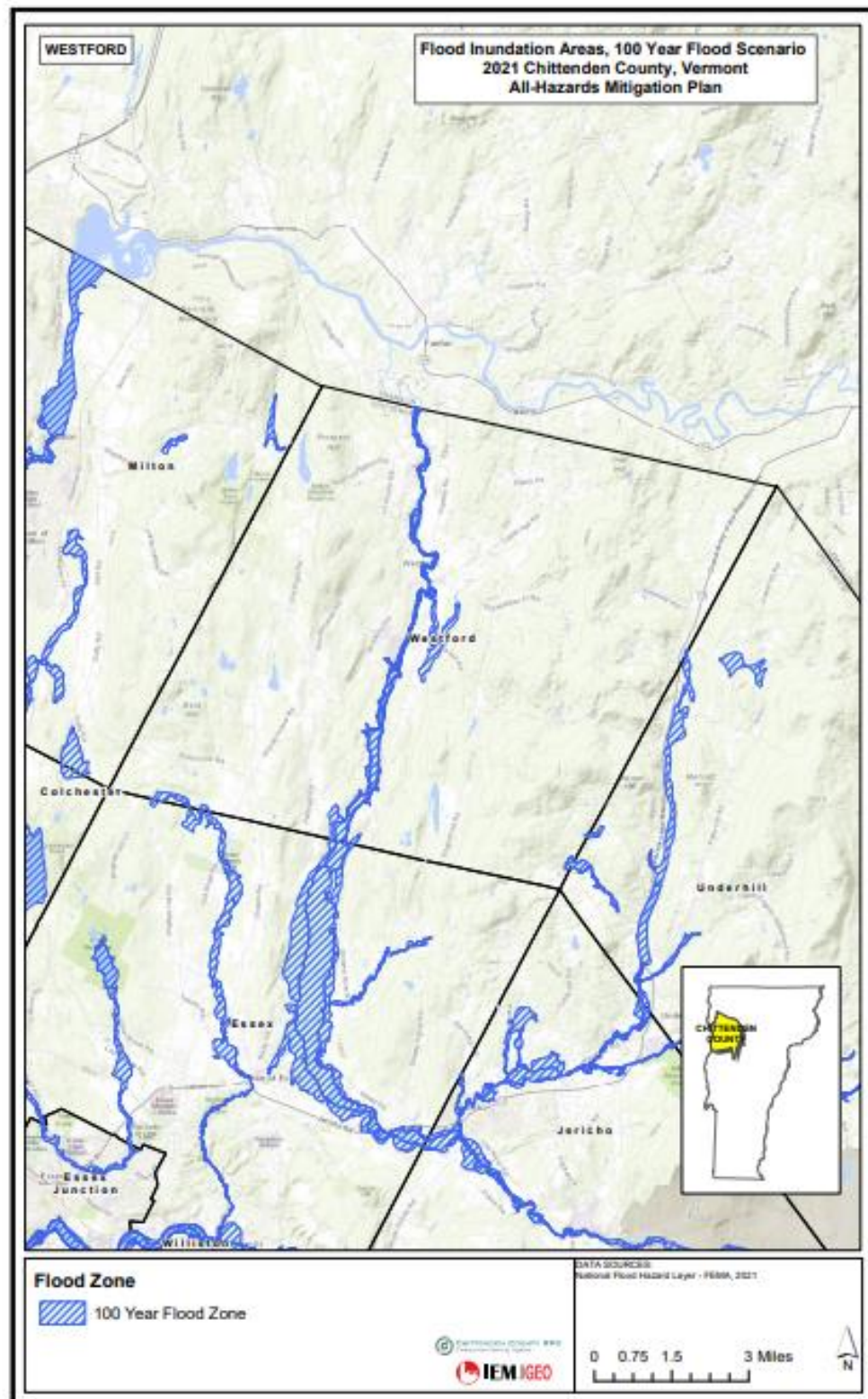


Figure 16.6: 100-Year Flood Scenario, Town of Westford⁶

⁶ Hazus, 100-Year Flood Scenario Run, October 14, 2021.

Non-Natural Hazards

The Town of Westford identified the following information related to technological and societal hazards.

Table 16.10: Technological and Societal Hazards of Concern to the Town of Westford

Hazard	Risk/Vulnerability Issue
Power Loss	Westford is vulnerable to power loss and telecommunications failure because the population is dispersed and repairing utility infrastructure in rural areas can take more time.
Telecommunications Failure	Westford is vulnerable to power loss and telecommunications failure because the population is dispersed and repairing utility infrastructure in rural areas can take more time.
Crime	Major crime is rare in the town, but small crimes are very common.
Economic Recession	Economic recession is highly ranked for both its direct impacts and its secondary effects on health, safety, and the environment. In a recession, property owners may not be able to maintain their properties, which are then more vulnerable to natural hazards.

16.5 HAZARD RISK RANKING

After developing hazard profiles, the Town of Westford Planning Committee conducted a two-step quantitative risk assessment for each hazard that considered population vulnerability, geographic extent/location, probability of future occurrences, and potential impacts and consequences. The numerical scores for each category were totaled to obtain an **Overall Risk Score**, which is summarized as one of these risk and vulnerability classifications:

- **Low:** Minimal potential probability and impact. Minimal or no property damage or loss of life expected.
- **Medium:** Moderate probability and potential impact; moderate threat level to the general population and/or the built environment. The potential damage is more isolated and less costly than a widespread disaster.
- **High:** Significant probability and widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past, causing significant impact.

The two-step hazard risk ranking methodology is detailed in **Section 4, Base Plan**. The Hazard Risk Ranking scores for Town of Westford are provided in **Attachment 2** of this annex.

The **Overall Risk Score** for each hazard served as the basis for determining whether a vulnerability assessment should be conducted. Natural hazard profiles are presented within the

hazard sub-sections in **Section 5, Base Plan**, and local detail is provided in the Jurisdiction Annexes.

Table 16.11: Hazard Risk Ranking Summary, Town of Westford

Hazard	Sum -Impact/Consequence Score	Probability	Total Risk Rating (Impact/Consequence x Probability)	Hazard Ranking
Severe Winter Storm	9	5	45	High
Human Infectious Disease	7	4	28	Medium
Severe Rainstorm	3	5	25	Medium
Flood	6	4	24	Medium
Fluvial Erosion	6	4	24	Medium
Extreme Temperatures	4	5	20	Medium
Invasive Species	4	4	16	Low
Wildfire	3	3	9	Low
Dam/Levee Failure	[Not Ranked]			

Table 16.12: Hazard Risk Ranking Summary Technological Hazards, Town of Westford

Hazard	Sum- Impact/Consequence Score	Probability	Total Risk Rating (Impact/Consequence x Probability)	Hazard Ranking
Power Loss	4	5	20	Medium
Telecommunications Failure	4	5	20	Medium
Water Pollution (algal bloom, etc.)	6	3	18	Low
Water Supply Loss	4	4	16	Low
Hazardous Materials Incident	5	3	15	Low
Major Transportation Incident	6	2	12	Low
Multi-structure Fire	4	2	8	Low
Other Fuel Service Loss	5	1	5	Low
Sewer Service Loss	3	1	3	Low
Natural Gas Service Loss	2	1	2	Low

Table 16.13: Hazard Risk Ranking Societal Hazards, Town of Westford

Hazard	Sum- Impact/Consequence Score	Probability	Total Risk Rating (Impact/Consequence x Probability)	Hazard Ranking
Crime	6	5	30	Medium

Economic Recession	7	4	28	Medium
Key Employer Loss	3	4	12	Low
Terrorism	8		0	Low
Civil Disturbance	4		0	Low

16.6 VULNERABILITY ASSESSMENT

The methodology for calculating loss estimates presented in this annex is the same as that described in [Section 4, Base Plan](#). Quantitative loss estimates are provided when available. Qualitative measurement considers hazard data and characteristics, including the potential impact and consequences based on past occurrences. Accompanying the data is a discussion of community assets potentially at risk during a hazard event.

Typical vulnerabilities from common hazards consist primarily of:

- Damage to public infrastructure especially roads and culverts
- Temporary closures of roads and bridges including from debris
- Temporary loss of power and/or telecommunications
- Temporary isolation of vulnerable individuals such as the elderly or those in poverty

More specifically, these vulnerabilities typically occur in association with the hazards profiled in [Section 4, Base Plan](#).

Table 16.14: Typical Vulnerabilities of Natural Hazards of Highest Concern, Town of Westford

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Severe Winter Storm	<ul style="list-style-type: none"> • Temporary closures of roads and bridges including from debris • Temporary loss of power and/or telecommunications • Temporary isolation of vulnerable individuals 	<ul style="list-style-type: none"> • Budget impacts from debris cleanup
Flooding	<ul style="list-style-type: none"> • Temporary closures of roads and bridges including from debris • Temporary loss of power and/or telecommunications • Temporary isolation of vulnerable individuals • Damage to public infrastructure 	<ul style="list-style-type: none"> • Budget impacts from road/bridge closures and repairs to public infrastructure • Damages to individuals' properties and businesses
Fluvial Erosion	<ul style="list-style-type: none"> • Temporary closures of roads and bridges including from debris 	<ul style="list-style-type: none"> • Budget impacts from road/bridge closures and

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
	<ul style="list-style-type: none"> Temporary loss of power and/or telecommunications Temporary isolation of vulnerable individuals Damage to public infrastructure 	<ul style="list-style-type: none"> repairs to public infrastructure Damages to individuals' properties and businesses
Severe Rainstorm	<ul style="list-style-type: none"> Temporary closures of roads and bridges including from debris Temporary loss of power and/or telecommunications Temporary isolation of vulnerable individuals Damage to public infrastructure 	<ul style="list-style-type: none"> Budget impacts from road/bridge closures and repairs to public infrastructure Damage to individuals' properties and businesses
Extreme Temperatures	<ul style="list-style-type: none"> Damage to public infrastructure Loss of water service 	<ul style="list-style-type: none"> Budget impacts due to needed repairs
Wildfire	<ul style="list-style-type: none"> Damage to private property 	<ul style="list-style-type: none">
Human Infectious Disease	<ul style="list-style-type: none"> Temporary closures of schools, businesses, places of assembly Increased demand on medical services 	<ul style="list-style-type: none"> If an epidemic is widespread and long-lasting, impact could be severe
Invasive Species	<ul style="list-style-type: none"> Small but ongoing cost to monitoring level of occurrence 	<ul style="list-style-type: none"> Unknown at this point

Relative to the county as a whole, the Town of Westford has a higher vulnerability to the following natural hazards:

- Severe Rainstorms, Fluvial Erosion due to high amount of gravel roads and mountainous terrain.
- Flooding due to the presence of the Browns River.

Vulnerabilities with regards to **Technological Hazards** are harder to project as these incidents occur with less frequency and less predictability.

Table 16.15: Typical Vulnerabilities of Technological Hazards of Highest Concern, Town of Westford

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Hazardous Materials Incident	<ul style="list-style-type: none"> Temporary closures of roads and bridges during cleanup 	<ul style="list-style-type: none"> If large event, potential high cleanup costs Injuries to persons
Water Service Loss	<ul style="list-style-type: none"> Temporary loss of service Temporary impacts to vulnerable individuals 	<ul style="list-style-type: none"> If extensive loss, potential budget impacts to service providers

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Gas Service Loss	<ul style="list-style-type: none"> Temporary loss of service Temporary impacts to vulnerable individuals 	<ul style="list-style-type: none"> If extensive loss, potential budget impacts to service providers
Telecommunications Failure	<ul style="list-style-type: none"> Temporary loss of service Temporary impacts to vulnerable individuals 	<ul style="list-style-type: none"> If extensive loss, potential budget impacts to service providers
Other Fuel Service Loss	<ul style="list-style-type: none"> Temporary loss of service Temporary impacts to vulnerable individuals 	<ul style="list-style-type: none"> If extensive loss, potential budget impacts to service providers.
Sewer Service Loss	<ul style="list-style-type: none"> Temporary loss of service Temporary impacts to vulnerable individuals 	<ul style="list-style-type: none"> If extensive loss, potential budget impacts to service providers
Water Pollution	<ul style="list-style-type: none"> Ongoing budgetary impacts due to permit requirements 	<ul style="list-style-type: none"> If repeat events, impacts to tourism-based businesses

Relative to the County as a whole, the Town of Westford has a slightly higher vulnerability to the following technological hazards:

- Power Loss and Telecommunications Failure due to its rural nature.

With regards to **Societal Hazards**, vulnerabilities are typically more dispersed among individuals and societal sectors compared to the natural environment and to technology which is fixed.

Table 16.16: Typical Vulnerabilities of Societal Hazards of Highest Concern, Town of Westford

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Crime	<ul style="list-style-type: none"> Uncreased demands on police services and social services 	<ul style="list-style-type: none"> Injuries Deaths
Key Employer Loss	<ul style="list-style-type: none"> Loss of economic activity Loss of portion of tax base Increased demands on social services 	<ul style="list-style-type: none"> Effects increased if employer is of significant size
Economic Recession	<ul style="list-style-type: none"> Loss of economic activity Increased demands on social services Some loss of tax revenue 	<ul style="list-style-type: none"> Effect increased if event is of extended duration
Civil Disturbance	<ul style="list-style-type: none"> Injuries to persons Damage to public and private property 	<ul style="list-style-type: none"> Budget impacts to police services depending upon severity of event Deaths

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Terrorism	<ul style="list-style-type: none"> Injuries to persons Damage to public and private property 	<ul style="list-style-type: none"> Budget impacts to police services depending upon severity of event Deaths

Relative to the County as a whole, there is insufficient data to conclude whether the Town is more vulnerable to one of the Societal Hazards noted above.

Population

The Centers for Disease Control and Prevention's (CDC) **Social Vulnerability Index (SVI)** is a tool that can be used to identify specific vulnerable populations. The CDC SVI depicts the vulnerability of communities at census tract level, by county, into fifteen census-derived factors grouped into four themes—socioeconomic status, household composition/disability, race/ethnicity/language, and housing type/transportation. Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills.

Based on the Overall SVI for Chittenden County, the Town of Westford is in an area of lowest vulnerability.

Table 16.17: Vulnerable Population in the Town of Westford, by Age Group

Population Category	Percentage
Children Under 5	-
Population age 65+	8.7%
Disabled Population	-
Population Below Poverty Level	1.7%

Built Environment

Although a vulnerability analysis was conducted utilizing the Hazus modeling scenarios, it was conducted at the county level and no additional Hazus data is available for specific jurisdictions.

The statistical overview of roads in the Town of Westford, shows the range of road types within the town, from highways to overwhelmingly unpaved roads. The different road types have different hazard vulnerabilities. Unpaved roads are more vulnerable to being washed out in a flood or heavy storm, while traffic incidents are more likely to occur on large, arterial roads. Municipal highways, bridges and dams are well mapped in Chittenden County. The state divides municipal (town) highways into three classes (described in **Section 4, Base Plan**) for purpose of highway maintenance and state aid.

Based on data reported for the period 2012 to 2016, there are no high crash road sections in the Town of Westford.

Table 16.18 Town of Westford, Highway mileage by class

Class 1	Class 2	Class 3	Class 4	State Hwy	Fed Hwy	Interstate	Total 1, 2, 3, State Hwy
	12.480	26.81	1.80	9.379			48.669

Table 16.19: Highway Mileage by Surface Type, Town of Westford

Paved	Gravel	Soil or Graded	Unimproved	Impassable	Unknown	Total
12	34	3	2		0.576	51.576
Total Known	Total Unpaved	% Paved	% Unpaved			
51.576	39	24.4%	75.6%			

Table 16.20: Bridges Located in the River Corridor Protection Areas (RCPA), River Corridors (RC), or Special Flood Hazard Areas (SFHA), Town of Westford

# of Structures in RCPA (FEH)	# of Insufficient Structures in RCPA	# of Structures in River Corridor	# of Insufficient Structures in RC	# of Structures in SFHA	# of Insufficient Structures in SFHA
14	7	19	6	7	3

Table 16.21: Culverts with a Geomorphic Rating of “Mostly Incompatible” or “Incompatible”, Town of Westford

Bankfull Width	Compatibility Score	Location	Road	Stream Name
20.00	5	.1 Mile W VT-15	Seymour Rd	Beaver Meadow Brook
34.00	7	1 Mile N Maple Tree Inc.	Brookside E Rd	Unnamed
43.96	7	.3 Miles W VT-15	Seymour Rd	Unnamed
20.41	7	.2 Miles W Old Stage Rd. on Rodgers Rd. 100 yards up trail on right	Rodgers Rd	Unnamed
105.09	7		Seymour Rd	Beaver Brook

51.14	8	Culvert is located 0.4 miles north of the intersection of Huntley Road and Cambridge Road	Huntley Rd	Unnamed Tributary of Browns River
37.50	8	.1 Miles S Old #11 Rd	Buad Rd	Unnamed
15.22	8	Farm field access crossing off Brookside Road		Rogers Brook
33.33	8	Driveway of House # off Old #11 Rd		Unnamed
28.40	9	Driveway aka Covey Rd N .3 Miles E of Cambridge Rd	Covey Rd N	Unnamed
24.75	9	.1 Miles N Manley Rd	Woods Hollow Rd	Unnamed
77.50	9	1 Mile N VT-128	Pettingil L Rd	Unnamed
51.25	9	Driveway of House #492 off Woods Hollow Rd		Unnamed
27.96	9	.75 Miles S of VT-128 off Woods Hollow Rd		Unnamed
55.56	10		Route 15	Beaver Brook
33.33	10	1.75 Miles N Hanley Rd	Osgood Hill Rd	Unnamed
28.57	10	Private Driveway (Drinkwine Lane) approximately 380 feet upstream of Browns River confluence. Drinkwine Lane is off of Huntley Road in Westford		Unnamed Tributary of Browns River
23.81	10	Driveway off Old Number 11 Road Culvert Crossing		Morgan Brook
33.87	10	Driveway of house #143 off Huntley Rd		Unnamed
49.23	10	Driveway of house #954 off VT-128		Unnamed
53.85	10	Driveway of house #960 off VT-128		Unnamed
27.62	10	.1 Mile E VT-15	Cloverdale Rd	Beaver Meadow Brook

Analysis of the historical development pattern of the town, including the proximity to the 100-year floodplain, River Corridors and River Streams indicates that most residential and non-residential development is clustered in valleys or low-lying areas; however, they are not typically located in SFHAs or River Corridors.

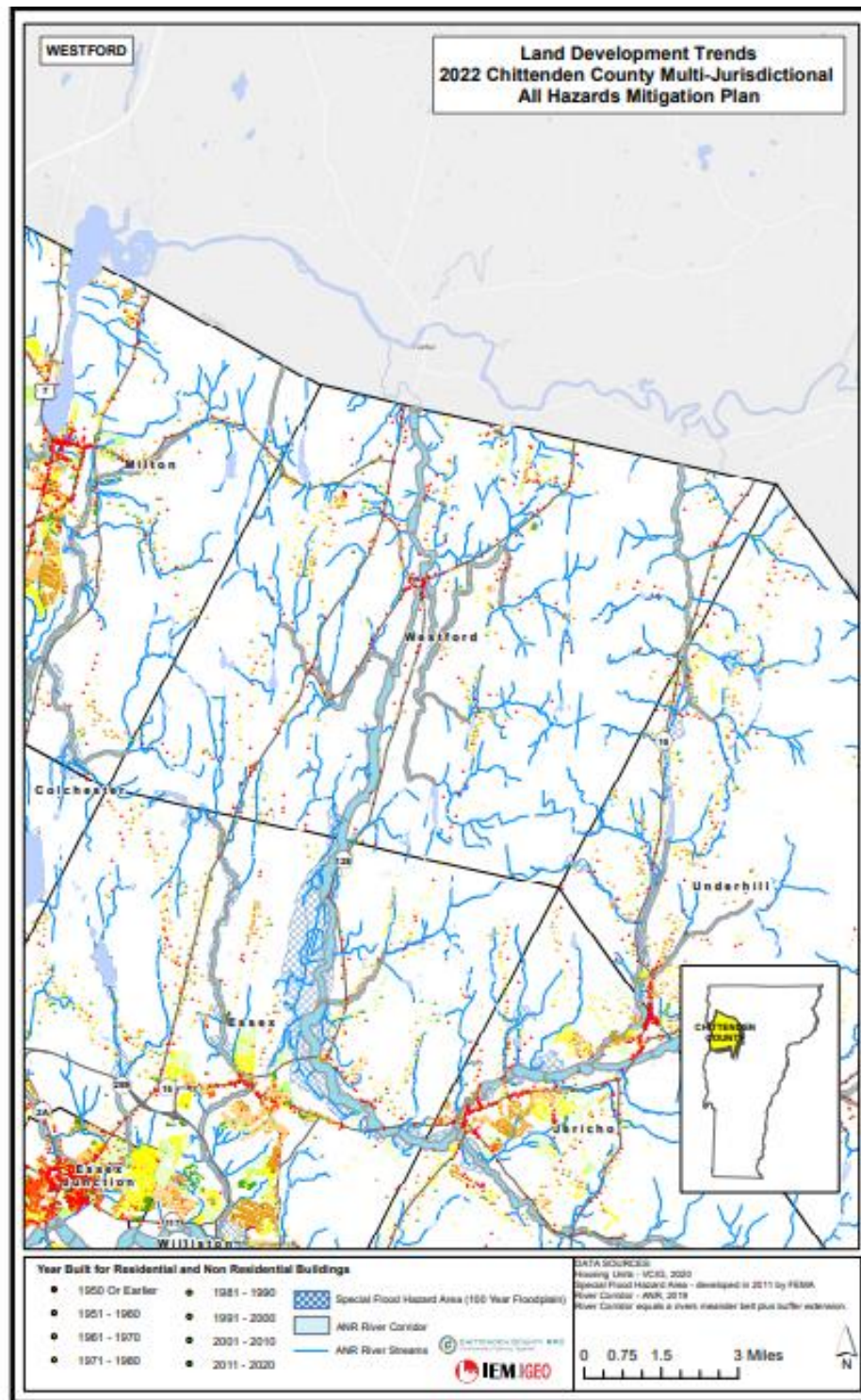


Figure 16.7: Land Development Trends, Town of Westford- 1950-2020⁷

⁷ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

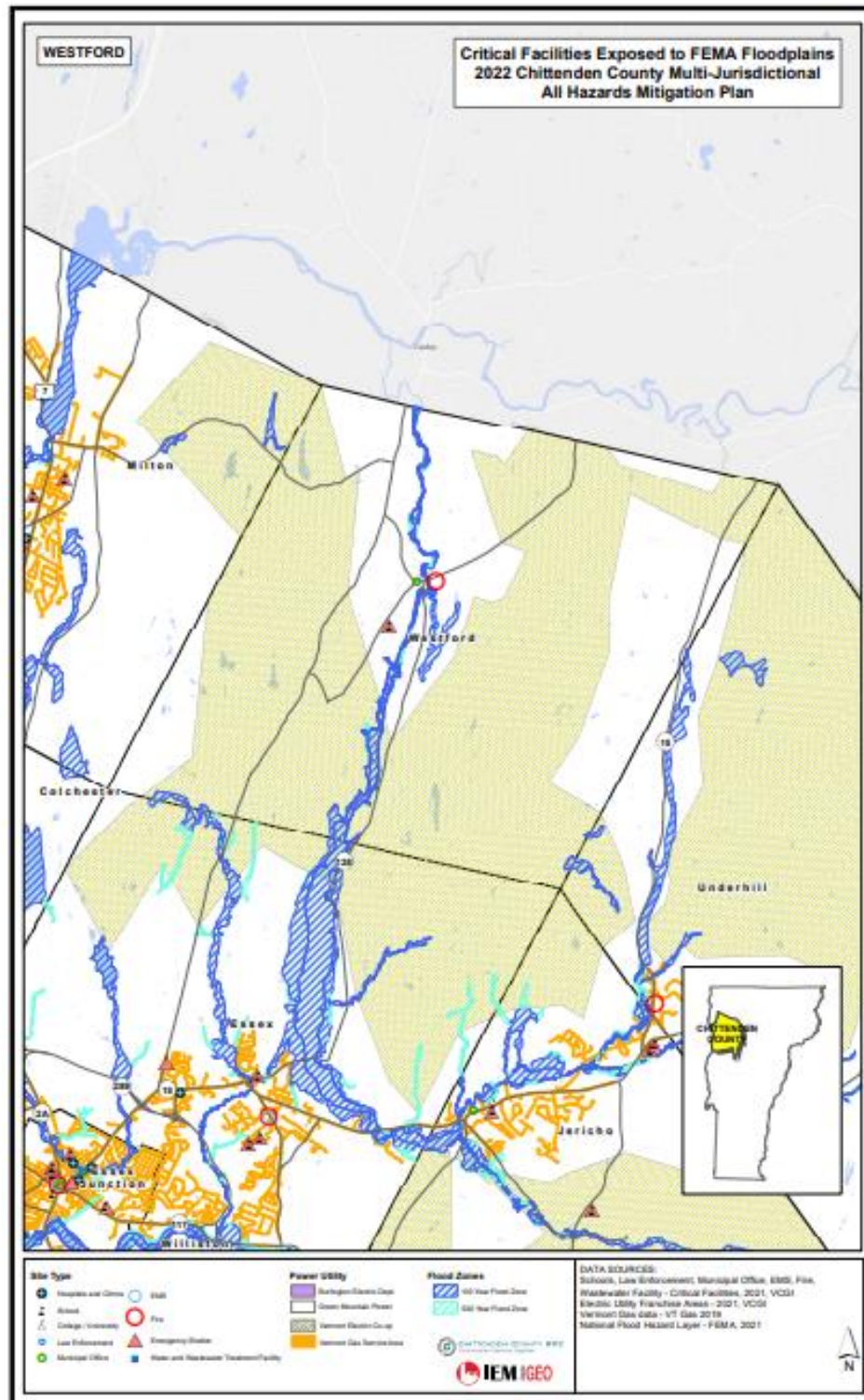


Figure 16.8: Critical Facilities, Town of Westford⁸

⁸ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

Table 16.22: Critical Facilities Exposed to FEMA Floodplains, Town of Westford

Total Facilities	In 100-year Floodplain	In 500-year Floodplain
1	1 Fire Station	0

Historical/Cultural Assets

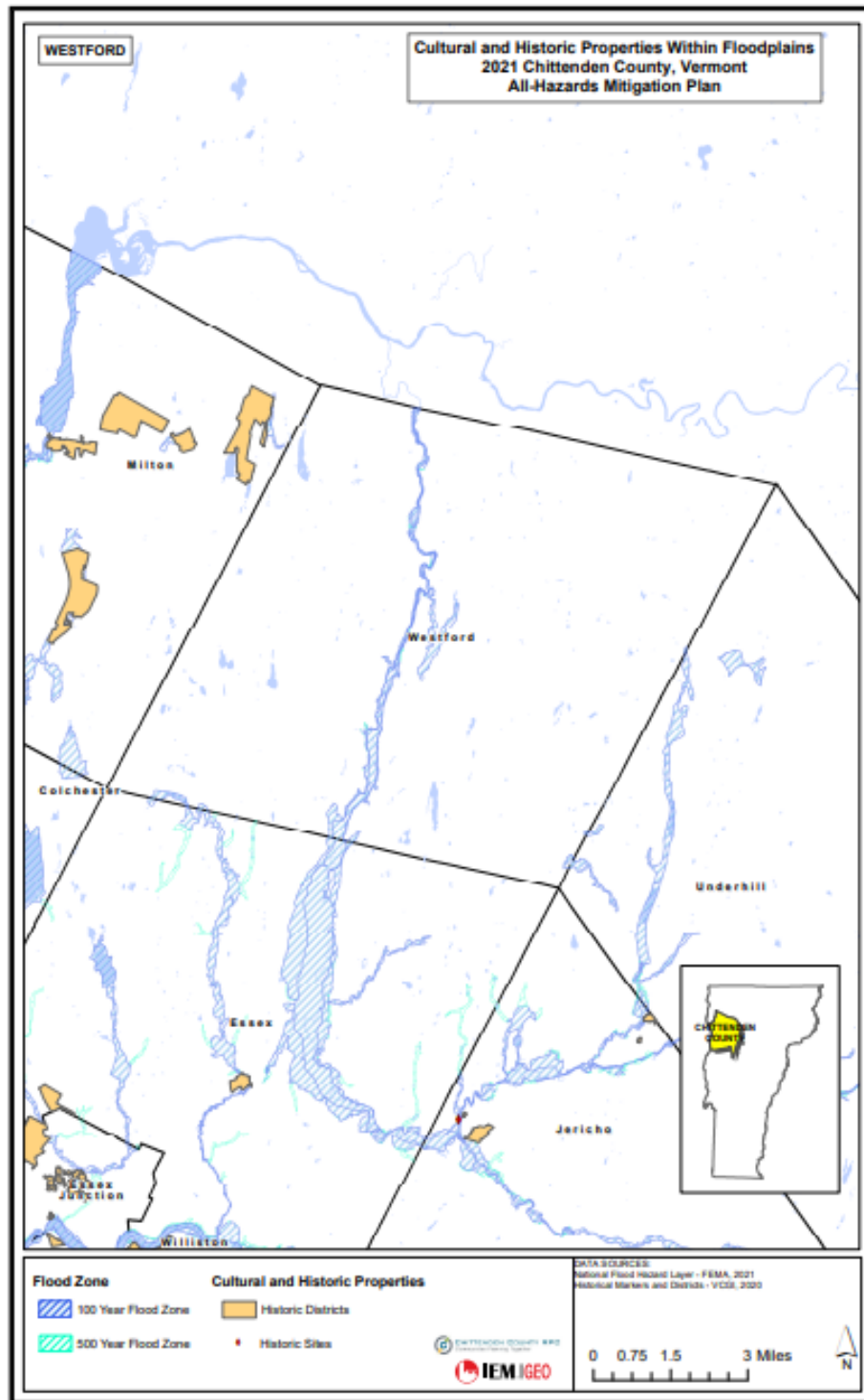


Figure 16.9: Cultural and Historic Properties Exposed to FEMA Floodplains, Town of Westford⁹

⁹ National Flood Hazard Layer, FEMA 2021; Vermont Center for Geographic Information, 2022.

16.7 CAPABILITY ASSESSMENT

Capabilities Assessment Summary Ranking and Gap Analysis

Planning and Regulatory

The Town of Westford has significant planning and regulatory capabilities, including:

- Stormwater management is addressed in the Town Plan and in the Road Report. The Town completed an Inventory of Priority Road Segments (PRS) or “hydrologically-connected” road segments, those currently meeting and not meeting MRGP standards; applied for MRGP coverage starting in July 2018. The Roads Stormwater Management Plan was approved by VT-DEC and implementation of remediations for site not meeting current standards has begun.
- The Town’s zoning bylaws include both a Water Resources Overlay District and a Floodplain District which preclude the construction of new homes or businesses and effectively act as conserved lands. The Town has had a Conservation Fund since 2004. Fund used in 2018 to conserve open space for recreation, resources protection, community wastewater leach field to serve a portion of the village. Specific parcels conducive to hazard mitigation have not yet been targeted. Municipality considers regulatory programs and voluntary conservation efforts as adequate to address any hazard mitigation concerns.
- The Unified Bylaw serves as the zoning ordinance and contains protections for steep slopes, recontouring of ledge outcroppings and for mitigation of stormwater in the development process. The ordinance includes the Water Resources Overlay. Application of the regulations achieves land use that reduces hazard impacts.
- There is no building code in Westford; new construction must obtain a zoning permit. Generally adequate with regards to mitigating the impacts of common hazards.

Table 16.23: Summary of Planning Regulatory Capabilities, Town of Westford

Comprehensive Plans	X
Capital Improvements Plans (Highway Dept.)	X
Economic Development Plan	-
Local Emergency Operations Plan	X
Continuity of Operations Plan	-
Transportation Plan (Town Plan, MRGP, Bridge Capital)	X
Stormwater Management Plan	X
Community Wildfire Ordinances	-
Zoning Ordinance	X
Subdivision Ordinance	X
Total	7

The Town of Westford has identified the following areas for improvement in planning and regulatory capabilities:

- Located in the northeast of Chittenden County, Westford is situated upstream of more urban municipalities. Conservation of land and water resources provides ecosystem functionality that benefits communities downstream and Lake Champlain. Westford sustains hazard mitigation capacity by remaining a rural town, protecting its natural resources from development, and focusing development where it can leverage locational efficiencies and other places where development is sustainable. The most important place Westford focuses development is the historic Village. The Town is seeking funding for community wastewater to develop new affordable housing in walking distance of daily needs. Westford protects water resources and prevents land development that increases fluvial erosion through its Water Resources Overlay (WRO) and Flood Hazard Overlay (FHO). To reduce the impacts of stormwater and flooding incidence on public roads the Town is implementing mitigation according to priorities in the LEMP and the General Roads Permit. Projects include resizing culverts and rebuilding approximately two miles of gravel roads each year to ensure good quality of the base and top layers which will improve drainage and reduce the likelihood of damage in hazard events. Looking ahead, the Planning Commission intends to adopt river corridor regulations to supplement the efficacy of regulations that protect water resources and prohibit development in areas of flood hazard.

Administrative and Technical Capabilities

The Town of Westford has significant administrative and technical capabilities, including:

- The Town has an appointed Emergency Management Coordinator, and an Emergency Operations Plan as required under the National Incident Management System which is the basis for incident management in Westford.
- The Town has in-house capacity for grant writing. The CCRPC is available to assist the Town with drafting grant applications to fund mitigation projects.
- Floodplain management and engineers/professionals trained in construction practices related to buildings and/or infrastructure is performed by consultants, hired as needed.

Table 16.24: Summary of Administrative and Technical Capabilities, Town of Westford

Planner(s) or engineer(s) with knowledge of land development and land management	X
Engineer/professionals trained in construction practices related to buildings and/or infrastructure	-
Planners/ Engineer(s) with an understanding of natural and/or manmade hazards	X
Floodplain manager Mutual Aid Compacts	-
Surveyor(s) Building Inspection	-

Staff with education or expertise to assess the community's vulnerability to hazards	X
Emergency Manager	X
Personnel skilled in GIS and/or HAZUS	-
Scientist familiar with hazards of the community	-
Civil Engineer Emergency Manager	-
Grant Writer(s)	X
Warning systems or services (automated callout, sirens, etc.)	-
Total	5

The Town of Westford has identified the following areas for improvement of administrative and technical capabilities:

- The Town's recent update of the Comprehensive Plan included review of Recommended Actions in the Hazard Mitigation Plan and formal incorporation within the Comprehensive Plan (or Plan implementation tasks) as warranted. The CCRPC reviewed and approved the new plan for consistency with requirements in state statute and consistency with the Chittenden County Regional Plan (2018 ECOS Plan). This review included a detailed staff critique with recommendations for improvement to ensure integration of elements of the local 2017 All Hazards Mitigation Plan into the Town's Comprehensive Plan.
- During the annual Town budget process, the requirements of this mitigation will be considered when the Select board develops the annual capital improvement plan.

Fiscal Capability

The Town of Westford has significant fiscal capabilities, including:

- To remediate a brownfields property with potential to be redeveloped for new and much needed affordable housing and to rebuild/expand its municipal offices, the Town received CDBG funding. A portion of this funding is being used for preliminary engineering of a stormwater design to intercept, sequester and filter stormwater draining into the Browns River from the subject property and neighboring parcels. Improving management of stormwater reduces flood risk in the existing context while ensuring sustainable redevelopment of a centrally located property in walking distance of daily needs and destinations.
- Municipal Planning Grants are used to avoid problems; Better Roads has grants for erosion planning and construction.
- The Town participates in state funding programs including Municipal Planning Grants (VT-ACCD), Better Roads Program (VTRANS), and MRGP (VT-DEC).
- The Town is pursuing public/private partnership to mitigate a Brownfields property in the Village Center for redevelopment. More effective management of stormwater at this property and adjoining Village lands is a key part of the long-term planning vision.

Table 16.25: Summary of Fiscal Capabilities, Town of Westford

Capital improvements project funding	X
Authority to levy taxes for specific purposes	X
Fees for water, sewer, gas, or electric services	-
Impact fees for new development	X
Stormwater utility fee	-
Incur debt through general obligation bonds and/or special tax bonds	X
Incur debt through private activities	X
Community Development Block Grant (CDBG)	X
Other Federal funding programs, Historical Preservation	X
State funding programs	X
Public/Private partnership funding sources	X
Total	10

The Town of Westford identified the following areas for improvement of fiscal capabilities:

- The municipality considers regulatory programs and voluntary conservation efforts as adequate to address any hazard mitigation concerns.
- Grant funding is pursued to inventory and mitigate problems that arise in the field, primarily in hydrologically connected areas on the town's roads.
- Various areas may be conserved in the future using the Conservation Fund but as of now, specific parcels conducive to hazard mitigation have not yet been targeted.

Program/Organization Capabilities

The Town of Westford has moderate program or organizational capabilities, including:

- The Town conducts public outreach and education via the website, Front Porch Forum, brochures and newsletters.
- The Town Conservation Committee provides guidance to the Planning Commission on environmental conservation.
- All Hazards Mitigation Plan developed in 2017 assists the Town in identifying all hazards (including flooding) facing the community and to develop mitigation strategies to reduce impacts of the identified hazards.
- The Fire Department educates about smoke and carbon monoxide alarms and detection. Child Safety and Restraint Programs are carried out in coordination with Essex Rescue and the Jericho/Underhill Fire Departments.
- With direction from the Fire Chief, the Town updated driveway and road standards for compliance with the Town Fire Ordinance to ensure public safety. As necessary, the Town provides key emergency operations individuals with training in disaster risk

management, emergency, preparedness, response and relief, including National Incident Management System (NIMS) training.

Table 16.26: Summary of Program/Organization Capabilities, Town of Westford

Civic groups serving special community needs	X
Ongoing public education or information program	X
Natural disaster or safety related school programs	X
StormReady certification	-
Firewise Communities certification	-
Public-private partnership initiatives addressing disaster-related issues	-
Other	X
Total	4

The Town of Westford has identified the following areas for improvement of program and organization capabilities:

- The Town should create an Emergency Mitigation, Preparedness, Response & Recovery Committee to ensure better coordination and assist the Emergency Coordinator, Town Administrator, Select board.
- The Town should seek to improve cell coverage for general community use, emergency response, and public safety, in addition to economic development.

Safe Growth

The Town completed the Safe Growth section of the Capability Assessment, noting significant comprehensive planning capabilities that address land use, transportation, stormwater management, environment, public safety, and subdivision regulation.

National Flood Insurance Program and Community Rating System

Westford has participated in NFIP regular program since 1988 and has a designated Floodplain Manager. The last Community Assistance Contract (CAC) was conducted on April 6, 2016, with no outstanding deficiencies. There is one NFIP policies with total insurance coverage of \$42,000; and there are zero repetitive loss properties reported. The Town does not participate in the voluntary Community Rating System (CRS).

Although program participation is not a hazard mitigation action to be included in the mitigation strategy per se, the Town will continue to participate in NFIP and enforce the Town's Floodplain Management regulations. The Town Zoning Administrator and the Town's Development Review Board (DRB) monitor compliance with the National Flood Insurance Program. The DRB reviews and adjudicates applications for development within the floodplain including any proposed new construction in the SFHA which is highly regulated. The Town also works with DEC to respond

to any local requests for Floodplain identification including questions about mapping. Additionally,

The Town will continue to:

- Identify the purpose of the floodplain regulation(s), as well as current and proposed ways to reduce flood losses.
- Serving as a mechanism for identifying flood hazard areas and related flood mapping issues.
- Oversees permit requirements for current and projected development projects.
- Inspect all development for continued compliance with town code.
- Applies development standards for flood-prone areas that minimize personal injury and property damage; and maintains documentation and risk analyses required for projects developed in these areas.
- Assist residents in obtaining information on flood hazards, flood maps, flood insurance and proper mitigation measures.

In an effort to meet NFIP requirements, the Town of Westford will make updates and revisions to Floodplain Management regulations as it deems necessary. These updates and revisions may be prompted by changes in local demographics; shifts in land use; trends such as the frequency and intensity of flood events; and other factors that may warrant municipal action. The Town will also continue to incorporate into future planning documents, including HMP updates, changes to the locations and designations of mapped floodplains.

Table 16.27: National Flood Insurance Program Status, Town of Westford¹⁰

Current Eff. Map Date	Number of Policies	Total Premiums (in dollars)	Total Coverage (in dollars)	Total Number of Claims Since 1978	Value of Claims Paid Since 1978 (in dollars)	Number of Repetitive Loss Properties
07/18/2011	1	\$241	\$42,000	0	\$0	0

Support for Municipal Capabilities

It should be noted that the Chittenden County Regional Planning Commission (RPC) provides multiple support services to the municipalities that assist in filling planning and regulatory, administrative and technical, and education and outreach capabilities. In addition, the RPC assists municipalities with identifying and managing funding opportunities through grants and other sources.

¹⁰ FEMA, National Flood Insurance Program Insurance Report, Vermont, June 26, 2018.

Table 16.28: Capability Assessment Summary Ranking for Town of Westford

Planning and Regulatory	Administrative and Technical	Safe Growth	Financial	Program/Organization
High	Moderate	High	High	Moderate

New Hazard Risk Challenges or Obstacles to be Monitored in the Next Planning Cycle

- The risk of cyber related incidents on Critical Infrastructure and Key Resource sites
- Climate change
- Increases in the number of excessive rainfall events that impact new areas with flood

16.8 MITIGATION ACTIONS*Changes in Priorities*

Westford has experienced moderate increase in population growth; however, it continues to be concerned about the availability of affordable housing and increase demand and impact of flooding on existing infrastructure (road system). The town's priorities have not changed since the last plan update and continues to make progress on mitigation actions.

Goals and Objectives

The Town of Westford adopted the five regional goals defined in [Section 6, Mitigation Strategy](#).

Status of Previous Actions

The Town of Westford reviewed its Mitigation Actions described in the 2017 *MHAHMP*.

Table 16.29: Status of Previous Mitigation Actions, Town of Westford

Action Date	Action #	Title of project	Hazard(s)	2022 Status Update
2017	2017-A-1	Culvert Upgrades (Town Road Foreman)	SR, F, FE, WP	This is an ongoing activity. 19 culvert upgrades on Town roads between 2017 and 2021. Move and continue as a 2022 Mitigation Action.
2017	2017-A-2	Drainage Improvements (Town Road Foreman)	SR, F, FE, WP	Between 2017 and 2021, 18,560 feet of roads were ditched/rock lined; using Municipal Funds, 32 100-meter segments were improved to MRGP standing; using FEMA funds, 154,100-meter segments were improved to MRGP standards, two culverts were upsized. Move and continue as a 2022 Mitigation Action.

2017	2017-A-3	Road Improvement (Town Road Foreman)	SR, F, FE, WP	107-inch CMP was installed in 2020 on Rogers Road replacing 48" culvert. Move and continue as a 2022 Mitigation Action.
2017	2017-B-1	Adopt River Corridor Regulations (Town Planner)	SR, F, FE, WP	The Town pursued initial draft but has inadequate resources of staff to further pursue adoption of these bylaws. Public and private infrastructure already receives significant protection due the Town's strong zoning for its Water Resources Overlay and Flood Hazard Overlay Districts. The Town will take up adoption of these bylaws as soon as it can. Move and continue as a 2022 Mitigation Action.
2017	2017-C-1	Develop Roads Stormwater Management Plan (Town Road Foreman)	SR, F, FE, WP	Required Erosion Inventory; Roads Stormwater Management Plan filed with State; Received State MRGP; Conceptual Design Estimates funded and prepared; RSWMP data report submitted to DEC MRGP portal in advance of Dec. 31, 2020. Move and continue as a 2022 Mitigation Action.
2017	2017-C-2	Begin Roads Stormwater Management Plan Implementation (Town Road Foreman)	SR, F, FE, WP	In 2020 Town began filing annual MRGP report. Move and continue as a 2022 Mitigation Action.
Acronym Key:	Dam Failure: DF			
	Extreme Temperatures: ET			
	Flood: F			
	Fluvial Erosion: FE			
	Human Infectious Disease: HID			
	Invasive Species: IS			
	Severe Rainstorm: SR			
	Severe Winter Storm: SWS			
	Wildfire: WF			

The locations of previous FEMA Public Assistance Projects in the Town of Westford, demonstrating recovery and mitigation activities, include damage to roads and bridges, protective measures, and recreational or other site impacts.

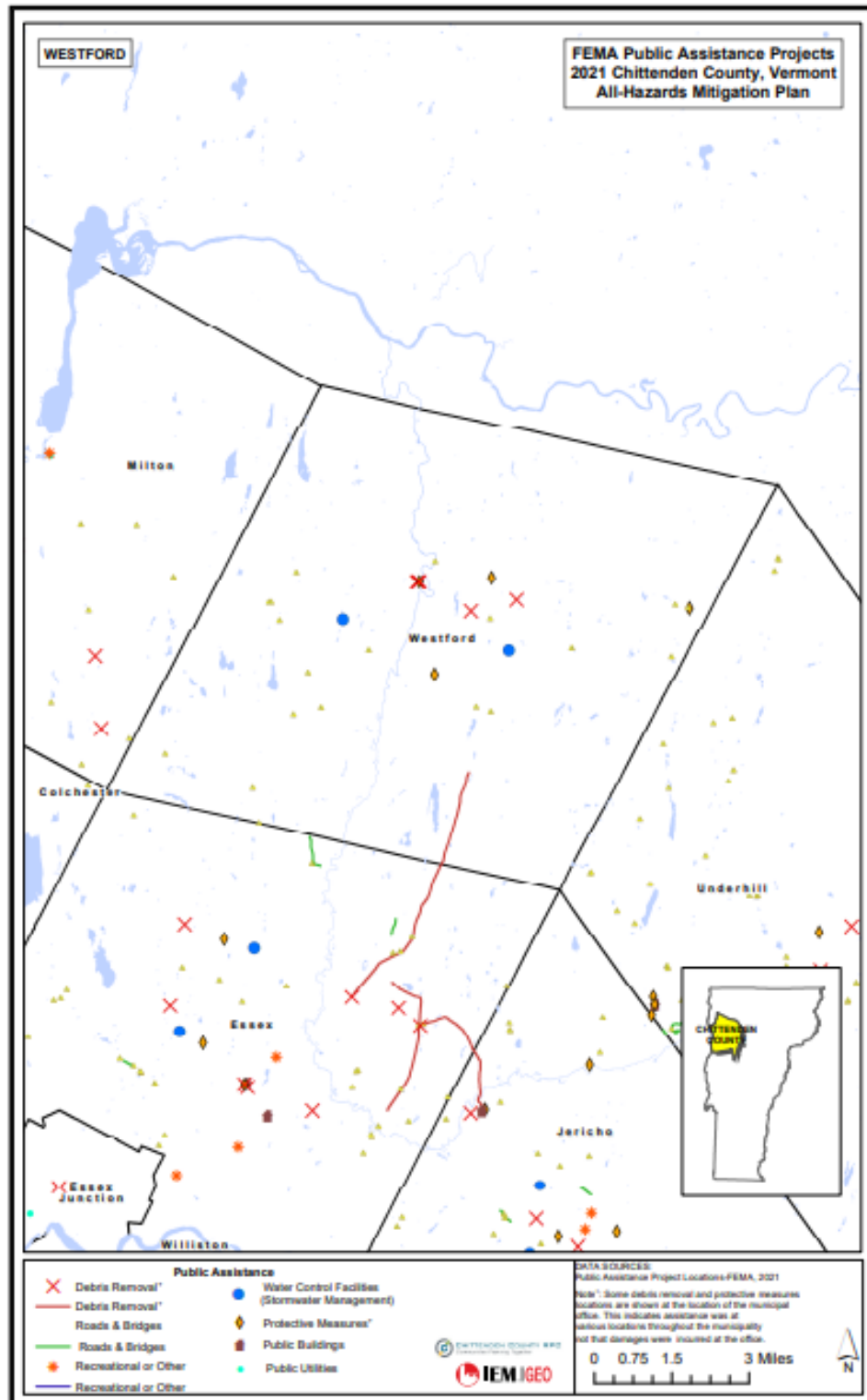


Figure 16.10: Previous FEMA Public Assistance Projects, Town of Westford¹¹

¹¹ Chittenden County Regional Planning Commission, GIS Database, October 14, 2021.

New Mitigation Actions

The Town of Westford identified six 2022 Mitigation Actions that were prioritized based on the Mitigation Action Ranking System described in **Section 6, Base Plan**.

Table 16.30: 2022 Prioritized Mitigation Actions, Town of Westford

Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-1	Culvert Upgrades	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	High
Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-2	Drainage Improvements	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	High
Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-3	Retrofit new and existing critical facilities to withstand the impacts of identified hazards.	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings;	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 New	High
Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking

Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-4	Adopt River Corridor Regulations based on complete fluvial geomorphology assessment	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	Low: Less than \$10,000	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium
Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-5	Develop Roads Stormwater Management Plan	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	Low: Less than \$10,000	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium
Action #	Proposed Action	Agency/ Department s	Hazard(s) Addressed	Risk Reduction Benefit	Estimated Cost	Funding Source	2021 Status	Ranking
2022-6	Begin Roads Stormwater Management Plan Improvements	Public Works	Flood, Fluvial Erosion, Severe Rainstorm, Severe Winter Weather	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium

Action Plan for Implementation and Integration

The Town of Westford identified several existing plans or planning processes that can serve to integrate hazard mitigation during the 2022-2027 planning cycle. The town will incorporate the mitigation actions outlined in this plan into the town plan during the next plan update process in 2029. The town plan update will be led by the Planning Commission, who will review this plan and determine those mitigation actions/strategies/goals that should be included in the town plan.

Table 16.31: Action Plan for Implementation and Integration, Town of Westford

Existing Plan or Procedure	Description of How Mitigation will be Incorporated or Integrated
Integrate goals into local Comprehensive Plan	Incorporate current and emerging risks and actions into planning efforts.
Review/update land development regulations for consistency with mitigation goals	Review Regulations for consistency with mitigation goals
Maintain regulatory requirements of floodplain management program (NFIP)	Provide support and training for floodplain management.
Enhance floodplain management through Community Rating System (CRS)	Review floodplain management and mapping.
Continue public engagement in mitigation planning	Continue to promote awareness of hazards and incorporate public feedback into planning processes.
Identify opportunities for mitigation education and outreach	Identify opportunities to conduct community outreach to promote the importance of mitigation projects.
Maintain ongoing enforcement of existing policies	Support applicable enforcement policies.
Monitor funding opportunities	Continue to monitor funding sources and coordinate with Departments on projects that support mitigation actions.
Incorporate goals and objectives into day-to-day government functions	Continue to incorporate mitigation into day-to-day government functions, including continual monitoring of the action items identified in the 2022 update.
Incorporate goals into day-to-day development policies, reviews & priorities	I Continue to incorporate mitigation into day-to-day activities.

16.9 ANNEX MAINTENANCE PROCEDURES

The method and schedule for maintaining, evaluating, and updating the MJAHMP is described in [Section 7, Base Plan](#). The Town of Westford will maintain its participation in the All Hazards Mitigation Plan Update Committee (AHMPUC) throughout the planning cycle, consistent with its role and responsibilities. The Town of Westford has designated the Zoning Administrator as lead responsible for all Plan Maintenance related activities.

Table 16.32: Plan Maintenance Responsibilities for the *Chittenden County, Vermont* Multi-Jurisdictional All-Hazards Mitigation Plan, Base Plan, Town of Westford

Monitoring the Plan	<ul style="list-style-type: none"> • Participate in the monitoring process as requested by the CCRPC staff • Assist in collecting and analyzing data • Assist in disseminating reports to stakeholders and the public • Maintain records and documentation of all jurisdictional monitoring activities • Promote the mitigation planning process with the public and solicit public input.
----------------------------	---

Evaluating the Plan	<ul style="list-style-type: none"> • Participate in the evaluation process as requested by the CCRPC staff • Assist in collecting and analyzing data • Assist in disseminating reports to stakeholders and the public • Maintain records and documentation of all jurisdictional monitoring activities • Promote the mitigation planning process with the public and solicit public input
Updating the Plan	<ul style="list-style-type: none"> • Represent the jurisdiction and participate in the planning cycle, including plan review, revision, and update process • Collect and report data to the Update Coordinator • Maintain records and documentation of all jurisdictional plan review and revision activities • Promote the mitigation planning process with stakeholders and the public and solicit public input

Revisions of the Jurisdiction Annex

The municipalities of Chittenden County will coordinate with the CCRPC for changes or updates to its jurisdictional annexes. Local participating jurisdictions have the authority to approve/adopt changes to their own Action Plans for Implementation without approval from the CCRPC or the Committee; however, the Committee and CCRPC should be advised of all changes as a courtesy and in consideration of potential changes or modifications to the regional *MJAHMP* that may conflict with the proposed annex changes. The CCRPC will be responsible for verifying that the proposed change will not affect the jurisdiction's compliance with current State and Federal mitigation planning requirements.

Municipalities may make administrative changes or updates to their mitigation actions and Action Plans for Implementation in their jurisdiction annexes at any time in coordination with the CCRPC staff.

A municipality may choose not to re-adopt the updated *MJAHMP* and its respective jurisdiction annex; however, it should be stated that the jurisdiction will no longer be eligible for FEMA hazard mitigation grants. A municipality may choose to develop, adopt, and submit its own Local All Hazards Mitigation Plan to FEMA Region I, consistent with the requirements of the Disaster Mitigation Act of 2000 and regulations contained in 44 CFR Part 201.6 in order to maintain eligibility.

The relative strength and depth of this method and schedule for monitoring and evaluating the plan is contingent upon funding from Emergency Management Planning grants, Hazard Mitigation Assistance grants, or similar sources. Adherence to the monitoring, evaluation, and update process schedule will ensure that the Plan is kept current throughout its five-year cycle.

Table 16.33: Jurisdiction Annex Maintenance Procedure, Town of Westford

Activity	Procedure and schedule	Outcome
Monitoring the Annex	1. Schedule the annual plan review with jurisdiction planning team.	Produce an annual report that includes the following:

Activity	Procedure and schedule	Outcome
	2. Review the status of all mitigation actions, using the <i>Mitigation Action Implementation Worksheet</i> (Section 7, Attachment B, Base Plan).	<ul style="list-style-type: none"> • Status update of all mitigation actions • Summary of any changes in hazard risk or vulnerabilities and capabilities • Summary of activities conducted for the Action Plan for Implementation and Integration
Evaluating the Annex	<ol style="list-style-type: none"> 1. Schedule the annual plan evaluation with jurisdiction planning team. 2. Evaluate the current hazard risks and vulnerabilities, and hazard mitigation capabilities using the <i>Planning Considerations Worksheet</i>, (Section 7, Attachment C, Base Plan). 	Submit the annual report to the <i>MJAHMP</i> AHMPUC Point of Contact
Updating the Annex	<ol style="list-style-type: none"> 1. Coordinate with the AHMPUC to identify the method and schedule for the five-year update of the <i>MJAHMP</i>. 2. Participate in the planning process. 3. Provide input related to the plan components. 4. Following FEMA designation of Approvable Pending Adoption (APA), adopt the updated plan. 	Adoption of the FEMA-approved plan every five years will maintain the jurisdiction's eligibility for federal post-disaster funding.

16.10 ANNEX ADOPTION

The Town of Westford Jurisdiction Annex will be adopted by the municipality's governing body concurrently with the *2022 Chittenden County Multi-Jurisdictional All Hazards Mitigation Plan*.

Following adoption, a copy of the Adoption Resolution will be maintained in this annex as [Attachment A](#), and a copy will be forwarded to Vermont Emergency Management (VEM) to submit to FEMA for final approval of the plan. The plan will expire five years from the date of FEMA's final approval letter.

16.11 ATTACHMENTS

ATTACHMENT 1: Adoption Resolution

ATTACHMENT 2: Planning Worksheets and Documentation

ATTACHMENT 3: Documentation of Public Participation

ATTACHMENT 4: Mitigation Actions

ATTACHMENT 1: Adoption Resolution

CERTIFICATE OF ADOPTION

October 13, 2022

Town of Westford, Vermont Selectboard

A Resolution Adopting the 2022 Chittenden County, Vermont Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS, the Town of Westford has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of the hazards profiled in the 2022 Chittenden County, Vermont Multijurisdictional Hazard Mitigation Plan, which result in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Westford has developed and received conditional approval from Vermont Emergency Management (VEM) for its 2022 Chittenden County, Vermont Multi-Jurisdictional Hazard Mitigation Plan (Plan) under the requirements of 44 CFR 201.6; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies, and Plan maintenance procedures for the Town of Westford; and

WHEREAS, the Plan recommends several hazard mitigation actions (projects) that will provide mitigation for specific natural hazards that impact the Town of Westford with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Westford eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by Town of Westford Selectboard:

1. The 2022 Westford, Vermont Local Hazard Mitigation Plan is hereby adopted as an official plan of the Town of Westford;
2. The respective officials identified in the mitigation action plan of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as part of this resolution for a period of five (5) years from the date of this resolution; and
4. An annual report on the process of the implementation elements of the Plan will be presented to the Selectboard by the Emergency Management Director or Coordinator.

IN WITNESS WHEREOF, the undersigned have affixed their signature and the corporate seal of the Town of

Westford this 13th day of October 2022



Lee McClenny, Chair



David Baczewski, Vice-Chair



William Cleary, Board Member



AITEST: Callie Hamdy, Town Clerk

ATTACHMENT 2: Planning Worksheets and Documentation

Natural Hazards Estimated Risk Matrix										
Westford		Dam/Levee Failure	Extreme Temperatures	Flooding	Fluvial Erosion	Human Infectious Disease	Invasive Species	Severe Rainstorm	Severe Winter Storm	Wildfire
Area Impacted										
Key:	0= No developed area impacted									0
	1= Less than 25% of developed area impacted		1	1	1		1	1		
	2= Less than 50% of developed area impacted									
	3= Less than 75% of developed area impacted									
	4= Over 75% of developed area impacted								4	
Consequences										
Health & Safety Consequences										
Key:	0= No health and safety impact						0			0
	1= Few injuries or illnesses		1	1	1			1	1	
	2= Few fatalities or illnesses									
	3= Numerous fatalities									
Property Damage										
Key:	0= No property damage		0				0			
	1= Few properties destroyed or damaged									1
	2= Few destroyed but many damaged			2	2			2	2	
	3= Few damaged and many destroyed									
	4= Many properties destroyed and damaged									
Environmental Damage										
Key:	0= Little or no environmental damage									

	1= Resources damaged with short-term recovery		1					1		1
	2= Resources damaged with long-term recovery						2		2	
	3= Resources destroyed beyond recovery			3	3					
Economic Disruption										
Key:	0= No economic impact									
	1= Low direct and/or indirect costs		1				1	1		1
	2= High direct and low indirect costs			2	2				2	
	3= Low direct and high indirect costs									
	4= High direct and high indirect costs									
Sum of Area & Consequences Scores			4	9	9		4	6	11	3
Probability of Occurrence										
Key:	1= Unknown but rare occurrence									
	2= Unknown but anticipate an occurrence									
	3= 100 years or less occurrence									3
	4= 25 years or less occurrence			4	4		4			
	5= Once a year or more occurrence		5					5	5	
Total Risk Rating										
	Total Risk Rating=		20	36	36		16	30	55	9
	Sum of Area & Consequences Scores									
	x Probability of Occurrence									
Low =	Hazard Risk Level 0-18									
Medium =	Hazard Risk Level 19-37									
High =	Hazard Risk Level 38-60									

Technological Hazards

Westford		Hazardous Materials Incident	Major Transportation Incident	Multi-Structure Fire	Natural Gas Service Loss	Other Fuel Service Loss	Pollution (algal bloom, etc.)	Power Loss	Sewer Service Loss	Telecommunications Failure	Water Pollution	Water Supply Loss
Area Impacted												
Key:	0= No developed area impacted				0				0			
	1= Less than 25% of developed area impacted	1	1	1		1					1	
	2= Less than 50% of developed area impacted							2		2		2
	3= Less than 75% of developed area impacted											
	4= Over 75% of developed area impacted											
Consequences												
Health & Safety Consequences												
Key:	0= No health and safety impact								0			
	1= Few injuries or illnesses	1		1	1	1		1		1	1	1
	2= Few fatalities or illnesses											
	3= Numerous fatalities											
Property Damage												
Key:	0= No property damage				0					0	0	0
	1= Few properties destroyed or damaged	1	1	1		1		1	1			
	2= Few destroyed but many damaged											
	3= Few damaged and many destroyed											
	4= Many properties destroyed and damaged											
Environmental Damage												
Key:	0= Little or no environmental damage			0	0	0		0		0		0
	1= Resources damaged with short-term recovery	1	1						1			
	2= Resources damaged with long-term recovery										2	
	3= Resources destroyed beyond recovery											
Economic Disruption												
Key:	0= No economic impact							0				
	1= Low direct and/or indirect costs	1	1	1	1				1	1		1
	2= High direct and low indirect costs					2					2	
	3= Low direct and high indirect costs											

	4= High direct and high indirect costs											
Sum of Area & Consequences Scores		5	6	4	2	5		4	3	4	6	4
Probability of Occurrence												
Key:	1= Unknown but rare occurrence				1	1			1			
	2= Unknown but anticipate an occurrence		2	2								
	3= 100 years or less occurrence	3									3	
	4= 25 years or less occurrence											4
	5= Once a year or more occurrence							5		5		
Total Risk Rating												
	Total Risk Rating=	15	12	8	2	5		20	3	20	18	16
	Sum of Area & Consequences Scores											
	x Probability of Occurrence											
Low =	Hazard Risk Level 0-18											
Medium =	Hazard Risk Level 19-37											
High =	Hazard Risk Level 38-60											

Societal Hazards							
Westford		Civil Disturbance	Crime	Economic Recession	Epidemic	Key Employer Loss	Terrorism
	Area Impacted						
	Key: 0= No developed area impacted						
	1= Less than 25% of developed area impacted	1				1	1
	2= Less than 50% of developed area impacted		2		2		
	3= Less than 75% of developed area impacted			3			
	4= Over 75% of developed area impacted						
Consequences							
Health & Safety Consequences							
Key:	0= No health and safety impact					0	
	1= Few injuries or illnesses	1		1			
	2= Few fatalities or illnesses		2		2		2

	3= Numerous fatalities						
Property Damage							
Key:	0= No property damage			0	0	0	
	1= Few properties destroyed or damaged	1	1				1
	2= Few destroyed but many damaged						
	3= Few damaged and many destroyed						
	4= Many properties destroyed and damaged						
Environmental Damage							
Key:	0= Little or no environmental damage	0	0		0	0	
	1= Resources damaged with short-term recovery			1			1
	2= Resources damaged with long-term recovery						
	3= Resources destroyed beyond recovery						
Economic Disruption							
Key:	0= No economic impact						
	1= Low direct and/or indirect costs	1	1				
	2= High direct and low indirect costs						
	3= Low direct and high indirect costs			2		2	
	4= High direct and high indirect costs				3		3
Sum of Area & Consequences Scores		4	6	7	7	3	8
Probability of Occurrence							
Key:	1= Unknown but rare occurrence						
	2= Unknown but anticipate an occurrence						
	3= 100 years or less occurrence						
	4= 25 years or less occurrence			4	4	4	
	5= Once a year or more occurrence		5				
Total Risk Rating							
	Total Risk Rating=	0	30	28	28	12	0
	Sum of Area & Consequences Scores						
	x Probability of Occurrence						
Low =	Hazard Risk Level 0-18						
Medium =	Hazard Risk Level 19-37						
High =	Hazard Risk Level 38-60						

Jurisdiction Westford Date: 11-2-2021**Participants:**Name: Kate Lalley Position/Title: Zoning AdministratorDepartment/Agency: Planning & Zoning**WORKSHEET: CAPABILITY ASSESSMENT*****Planning and Regulatory***

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Please indicate which of the following your jurisdiction has in place.

Plans	<ul style="list-style-type: none"> • Yes or No? • Year 	<ul style="list-style-type: none"> • Does the plan address hazards? • Does the plan identify projects to include in the mitigation strategy? • Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes; update adopted in 2021	Yes, the Town Plan addresses hazards Yes, under implementation No, plan is advisory and for reference
Capital Improvements Plan	Yes	Adopted annually. Capital budget and program lists and describes the capital projects to be undertaken during each of following five years, the estimated cost of those projects, and the proposed method of financing
Economic Development Plan	No	Addressed in the Town Plan
Impact fees for new development	No	Not currently, but used previously for bond to expand the school
Local Emergency Operations Plan	Yes, annually adopted	Yes, LEOP, now LEMP, is adopted annually. Yes, contains Major High Hazard and/or Vulnerable Sites List
Continuity of Operations Plan	No	LEMP addresses how critical operations will continue under range of circumstances (Planning Task #5 Disaster Lead Agency/Coordinator). The Town has an appointed Emergency Management Coordinator, and an Emergency Operations Plan as required under the National Incident Management System which is the basis for incident management in Westford.
Transportation Plan	Yes	Transportation Planning is covered in the Town Plan Implementation and operations details in the Road Committee Road Report, last updated 2017

Stormwater Management Plan	Yes	SW management is addressed in the Town Plan and in the Road Report. The Town completed an Inventory of Priority Road Segments (PRS) or “hydrologically-connected” road segments, those currently meeting and not meeting MRGP standards; applied for MRGP coverage starting in July 2018. The Roads Stormwater Management Plan was approved by VT-DEC and implementation of remediations for site not meeting current standards has begun.
Community Wildfire Protection Plan	No	Responsibility of Fire Department
Other special plans (e.g., brownfields redevelopment, disaster recovery, Local Waterfront Redevelopment Plan, climate change adaptation, etc.)	No	These issues are indirectly addressed in the Town Plan discussion of natural resource protection (wetlands, steep slopes, forest cover), future land use that promotes Smart Growth, protection of water resources and flood hazard areas
Building Code, Permitting, and Inspection	Yes or No?	Are codes adequately enforced?
Building Code	NA	There is no building code in Westford; New construction must obtain a zoning permit. Generally adequate with regards to mitigating the impacts of common hazards.
Building Code Effectiveness Grading Schedule (BCEGS) Score	NA	There is no building code in Westford.
Fire Department ISO rating	9	Westford does not have a building code. State fire code rules apply to all structures open to the public and all multi-family buildings of 3 units or more. Multiple structures are farther than 5 miles from the Fire Station and Fire Department Mutual Aid Agreements are in place. The Town lacks pressurized water. The bylaw contains driveway and road construction standards that facilitate fire and rescue and the need to bring water to sites.
Site Plan review requirements	Yes	Chapter 320 in Land Use and Development Regulations (LUDR)
Land Use Planning and Ordinances	Yes or No?	<ul style="list-style-type: none"> Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	The ordinance is a Unified Bylaw. Application of the regulations achieves land use that reduces hazard impacts. The ordinance is adequately administered and enforced.
Subdivision ordinance	Yes	Unified Bylaw (see above).
Floodplain ordinance	*Yes	Flood Hazard Overlay in the bylaw guides where development can occur. The Town enforces its regulations.
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	*Yes	Bylaw contains protections for steep slopes, recontouring of ledge outcroppings and for mitigation of stormwater in the development process. The ordinance includes the Water Resources Overlay. Wildfire risk is managed by the fire warden and issuance of burning permits. All regulations are enforced by the Town.

Flood insurance rate maps	Yes	Current Effective Map Adoption Date 7/18/11; According to NFIP no properties in Westford. The Town Zoning Administrator and the Town's Development Review Board (DRB) monitor compliance with the National Flood Insurance Program. The DRB reviews and adjudicates applications for development within the floodplain. No need at this time to expand NFIP participation.
Acquisition of land for open space and public recreation uses	Yes. Select board has final say over expenditures recommended by the Conservation Commission.	The Town's zoning bylaws include both a Water Resources Overlay District and a Floodplain District which preclude the construction of new homes or businesses and effectively act as conserved lands. The Town has had a Conservation Fund since 2004. Fund used in 2018 to conserve open space for recreation, resources protection, community wastewater leach field to serve a portion of the village. Specific parcels conducive to hazard mitigation have not yet been targeted. Municipality considers regulatory programs and voluntary conservation efforts as adequate to address any hazard mitigation concerns.
Other		
How can these capabilities be expanded and improved to reduce risk?		
<p>Located in the northeast of Chittenden County Westford is situated upstream of more urban municipalities. Conservation of land and water resources provides ecosystem functionality that benefits communities downstream and Lake Champlain. Westford sustains hazard mitigation capacity by remaining a rural town, protecting its natural resources from development, and focusing development where it can leverage locational efficiencies and other places where development is sustainable. The most important place Westford focuses development is the historic Village. The Town is seeking funding for community wastewater to develop new affordable housing in walking distance of daily needs. Westford protects water resources and prevents land development that increases fluvial erosion through its Water Resources Overlay (WRO) and Flood Hazard Overlay (FHO). To reduce the impacts of stormwater and flooding incidence on public roads the Town is implementing mitigations according to priorities in the LEMP and the General Roads Permit. Projects include resizing culverts and rebuilding approximately 2 miles of gravel roads each year to ensure good quality of the base and top layers which will improve drainage and reduce the likelihood of damage in hazard events. Looking ahead, the Planning Commission intends to adopt river corridor regulations to supplement the efficacy of regulations that protect water resources and prohibit development in areas of flood hazard.</p>		

Administrative and Technical

Identify whether your community has the following administrative and technical capabilities. These include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. If your jurisdiction does not have local staff resources, please indicate if these are available through agreement with other entities, or at the county level to provide the services or technical assistance.

Staff/Personnel Resources	Have Capability Y/N	Department/ Agency and Position	Effective Coordination?	Adequate Staffing?	Integrated into Mitigation Planning?
---------------------------	------------------------	---------------------------------------	----------------------------	-----------------------	---

A. Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Planner	Yes	No	Yes
B. Engineer/professionals trained in construction practices related to buildings and/or infrastructure	No	No	No	Consultants hired as needed	Consultants hired as needed
C. Planners/Engineer(s) with an understanding of natural and/or manmade hazards	Yes	ZA is a landscape architect	Yes	Consultants hired as needed	Consultants hired as needed
D. Floodplain manager	No	No			Regulated under Bylaw
E. Surveyor(s)	No	No		Consultants	Regulated under Bylaw
F. Staff with education or expertise to assess the community's vulnerability to hazards	Yes			CCRPC assistance as needed	Planning & Zoning Staff; Conservation Committee; Consultants as needed
G. Personnel skilled in GIS and/or HAZUS	No	No	yes	CCRPC	Yes
H. Scientist familiar with hazards of the community	No	No			Consultants as needed
I. Emergency manager	Yes	Appointed by the Select board	Yes	Yes, coordinates with Road Manager	Yes, through LEMP
J. Grant writer(s)	Yes	Planning and Zoning, Town Administrator ; CCRPC as needed	NA	In house capacity; CCRPC as needed	yes
k. Warning systems or services (automated callout, sirens, etc.)	No	Emergency Manager			

How can these capabilities be expanded and improved to reduce risk?

The Town's recent update of the Comprehensive Plan included review of Recommended Actions in the Hazard Mitigation Plan and formal incorporation within the Comprehensive Plan (or Plan implementation tasks) as warranted. The CCRPC reviewed and approved the new plan for consistency with requirements in state statute and consistency with the Chittenden County Regional Plan (aka the ECOS 2018 Plan). This review included a detailed staff critique with recommendations for improvement and ensure integration of elements of the local AHMP into the Town's Comprehensive Plan.

During the annual Town budget process the requirements of this mitigation will be considered when the Select board develops the annual capital improvement plan. The CCRPC is available to assist the Town with drafting grant applications to fund mitigation projects.

Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in the past and for what type of activities/	Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Yes	For capital improvements, typically used to fund road and other essential infrastructure projects.	Yes
Authority to levy taxes for specific purposes	Yes	Select board has not pursued this.	Yes
Fees for water, sewer, gas or electric services	No	Not municipally provided	If Town is successful in funding community wastewater in the Village there is potential to address this in an ordinance/utility
Impact fees for new development	Yes	Used to pay financing for school bond (ended)	Yes
Storm water utility fee	No	No, Town relies on regulations in the bylaw to achieve desired ends – prioritizing conservation and regulation to avoid/deter/mitigate for hazards created in the development process	No
Incur debt through general obligation bonds and/or special tax bonds	Yes	Yes	Yes
Incur debt through private activities	Yes	No	To date the municipality has used regulatory approaches to promote conservation and restrict development in areas of hazard.
Community Development Block Grant	Yes	Yes, for brownfields remediation necessary to redevelop village property for affordable housing, municipal uses	Yes, mitigation of stormwater from adjacent properties impacts this site. Funding covers preliminary stormwater design to address this.
Other federal funding programs	Yes	Yes, FEMA	
State funding programs	Yes	Yes, Municipal Planning Grants (VT-ACCD), Better Roads Program (VTRANS), MRGP (VT-DEC)	Municipal Planning Grants can be used to AVOID problems; Better Roads has grants for erosion planning and for construction
Public/Private partnership funding sources	Yes	Yes, the Town is working on this to mitigate a brownfields property in the Village Center for redevelopment	Yes, more effective management of stormwater at this property and adjoining Village lands is a key part of the long-term planning vision
How can these capabilities be expanded and improved to reduce risk?			
The municipality considers regulatory programs and voluntary conservation efforts as adequate to address any hazard mitigation concerns. Grant funding is pursued to inventory and mitigate problems that arise in the field, primarily in hydrologically connected areas on the town's roads. Various areas may be conserved in the future using the Conservation Fund but as of now, specific parcels conducive to hazard mitigation have not yet been targeted. To			

remediate a brownfields property with potential to be redeveloped for new and much needed affordable housing and to rebuild/expand its municipal offices, the Town received CDBG funding. A portion of this funding is being used for preliminary engineering of a stormwater design to intercept, sequester and filter stormwater draining into the Browns River from the subject property and neighboring parcels. Improving management of stormwater reduces flood risk in the existing context while ensuring sustainable redevelopment of a centrally located property in walking distance of daily needs and destinations.

Education and Outreach

Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	The Town conducts public outreach and education via the website, FPF, brochures and newsletters. The Town Conservation Committee provides guidance to the Planning Commission on environmental conservation. All Hazards Mitigation Plan developed in 2017 assists the Town in identifying all hazards (including flooding) facing the community and to develop mitigation strategies to reduce impacts of the identified hazards.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education, household recycling, etc.)	Yes	The Fire Department educates about smoke and CO alarms and detection. Child Safety and Restraint Programs carried out in coordination with Essex Rescue and the Jericho/Underhill Fire Departments. The Town conducts public outreach and education via the website, FPF, brochures and newsletters
Natural disaster or safety related school programs	Yes	The Fire Department conducts fire prevention instruction at the elementary school.
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	

Other		With direction from the Fire Chief the Town updated driveway and road standards for compliance with the Town Fire Ordinance to ensure public safety. As necessary, the Town provides key emergency operations individuals with training in disaster risk management, emergency, preparedness, response and relief, including National Incident Management System training.
How can these capabilities be expanded and improved to reduce risk?		
<p>The town should create an Emergency Mitigation, Preparedness, Response & Recovery Committee to ensure better coordination and assist the Emergency Coordinator, Town Administrator, Select board. The Town should seek to improve cell coverage for general community use, emergency response, public safety, in addition to economic development.</p>		

WORKSHEET: NFIP SURVEY FORM

National Flood Insurance Program (NFIP) Survey Form

Jurisdiction: Town of Westford_ Floodplain/NFIP Administrator__Kate Lalley, ZA; Westford Development Review Board.

Phone: __802-878-4587____ Date: __11-3-2021__ Email:
 __Zoning_Admin@westfordvt.us_____

Jurisdiction Participants:

Please provide the information below to document your community's participation in and continued compliance with the NFIP, as well as to identify areas for improvement that could be potential mitigation actions. Indicate the source of information, if different from the one included.

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	None
How many claims have been paid in the community? What is the total	FEMA NFIP or Insurance Specialist	\$1,027.53 paid to a private individual in 2011. An open public

amount of paid claims? How many of the claims were for substantial damage?		assistance grant from FEMA (DR4474) is being used to repair damage from October 31, 2019 storm that damaged roads, culverts and bridges across Vermont.
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	One residential structure and no commercial/industrial structures are located within the 100 year floodplain. No infrastructure subject to municipal regulation, have been constructed in either the Special Flood Hazard Areas or mapped River Corridor Protection Areas.
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	1 residential structure located in floodplain of Browns River.
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	No
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	New DFIRMS adopted in 2011. The Town Zoning Administrator and the Town's Development Review Board (DRB) monitor compliance with the National Flood Insurance Program. The DRB reviews and adjudicates applications for development within the floodplain.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None. Municipal bylaw prescribes development processes that conserve ecosystem resiliency to flood and stormwater hazard, development mitigations for stormwater, erosion. No need, at this time, to expand NFIP participation.
Compliance History		
Is the community in good standing with NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes, the municipality participates in the NFIP, zoning bylaws regulate development in designated flood hazard areas. The Town also regulates development near other waterbodies and wetlands. As a result, little to no development is likely to take place in flood hazard areas or river corridor protection areas. These zoning requirements effectively mitigate damages from Flood and Fluvial Erosion hazards to future structures.

Are there any outstanding compliance issues (i.e., current violations)?	Zoning Administrator	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Zoning Administrator, Planner, Town Administrator	The Town participates in the NFIP but does not participate in the CAP and sees no need at this time to expand participation.

Safe Growth (Optional)

This worksheet identifies potential gaps in your community's growth guidance instruments and improvements that could be made to reduce vulnerability to future development.

Comprehensive Plan ****	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	x	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	x	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	x	
Transportation		
1. Does the transportation plan limit access to hazard areas?	x	
2. Is transportation policy used to guide growth to safe locations?	x	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	x	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	x	
	x	

2. Do environmental policies maintain and restore protective ecosystems?		
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	x	
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA-approved Local Hazard Mitigation Plan?	x	
2. Is safety explicitly included in the plan's growth and development policies?	x	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	x	
Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	x	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	x	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	x	
4. Does the ordinance prohibit development within, or fining of, wetlands, floodways, and floodplains?	x	
Subdivision Regulations	Yes	No
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	x	

2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	x	
3. Do the regulations allow density transfer where hazard areas exist?	x	
Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	x	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	x	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA-approved Local Hazard Mitigation Plan?	x	
Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigate natural hazards?		
2. Does the building code contain provision to strengthen or elevate construction to withstand hazard forces?		
3. Do economic development or redevelopment strategies include provisions for mitigation of natural hazards?		
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?		

ATTACHMENT 3: Documentation of Public Participation

Hazard Mitigation Planning for Chittenden County

Hazard mitigation planning is a process that identifies hazards and their risks to your community. Over the next several months, your community's Hazard Mitigation will be updated.

Read below about how to learn more and participate!

This is your community's plan!	Disasters can happen anytime, anywhere, and any place.
<p>To have value, the plan must represent the current needs and values of your community and be useful for officials, stakeholders, and citizens. Consider the critical importance of mitigation to:</p> <ul style="list-style-type: none"> • Protect public safety and prevent loss of life and injury. • Lessen impact to existing and future development. • Prevent damage to a community's unique cultural, historical, and environmental assets. 	<p>They cause loss of life, damage buildings and infrastructure, and have devastating consequences on a community's economic, social, and environmental well-being.</p> <p>Hazard mitigation planning is a process that identifies hazards and their risks to your community and assesses the vulnerability of people, property, the environment, and the economy to one or more hazards. The end result is a comprehensive mitigation strategy that presents recommended sustained actions to reduce disaster-related damages and minimizes long-term community risk to the hazards.</p> <p>In the June 2021, Chittenden County municipalities initiated a collaborative planning effort to develop the 2022 update of the Chittenden County Multi-Jurisdictional Hazard Mitigation Plan. The benefits derived from the planning process, and the recommended mitigation actions that will ultimately be implemented, will significantly improve community resilience and sustainability.</p>

Take the Survey >>

Over the next several months staff of [IEM, an international disaster and crisis management firm](#) will be working with emergency management, planning and public works staff of your local municipality to update your municipality's local Hazard Mitigation Plan.

Your knowledge on local hazards is critical to good planning.

Participate in our online survey!

- [Take the survey](#) to provide your opinion on local hazard events and their impact on you, your family, and the community. The survey will be open from October 1 through October 30.
- Contact your local city or town officials to learn how to provide comment on the draft municipal Local Hazard Mitigation Plan to ensure it reflects your experience and concerns.

Questions & Contact	More Information
If you have questions, contact Dan Albrecht, CCRPC Senior Planner at dalbrecht@ccrpcvt.org or 802-861-0133	To view the current mitigation plan for your community please visit the CCRPC website.

Or Leroy Thompson, IEM Senior Planner at leroy.thompson@iem.com or 850-570-9867	This planning project is funded by a FEMA grant provided through Vermont Emergency Management (VEM). The project is a joint effort between IEM and the Chittenden County Regional Planning Commission (CCRPC) to assist Chittenden County municipalities.
---	---

Published

County Hazard Mitigation Plan Survey

Five Sisters – No. 6205 • Emma Vaughn • Communications Manager, Chittenden County Regional Planning Commission

Posted to: Centennial, Downtown, ONE Central, ONE East, ONE West, Appletree Point, Crescent Woods, Ethan Allen, Far North End, Lakewood, Village Green, Birchcliff, Five Sisters, Hill Section, King Maple, Lakeside, Oakledge, Redstone Quarry, South Union, The Addition, Charlotte, Hinesburg, Shelburne, Bay Creek, Clay Point, Colchester Village, Colchester West, Malletts Bay, Milton, Butlers Corner, Countryside, Essex Center, Essex West, Fairview Farms, Five Corners North, Five Corners South, Rural Essex, The Fort, Jericho, Underhill, Westford, Bolton, Huntington, Richmond, Chamberlin, East Terrace, Eastwoods, Kennedy, Mayfair Park, Queen City Park, SWSB, Southeast Quadrant, The Orchards, Brennan Woods, Williston, Winooski **show less**
Oct 4, 2021

Announcement

Hazard mitigation planning is a process that identifies hazards and their risks to your community and assesses the vulnerability of people, property, the environment, and the economy to one or more hazards. The end result is a comprehensive mitigation strategy that presents recommended sustained actions to reduce disaster-related damages and minimizes long-term community risk to the hazards.

In June 2021, Chittenden County municipalities initiated a collaborative planning effort to develop the 2022 update of the Chittenden County Multi-Jurisdictional Hazard Mitigation Plan. The benefits derived from the planning process, and the recommended mitigation actions that will ultimately be implemented, will significantly improve community resilience and sustainability.

Over the next several months staff of IEM, an international disaster and crisis management firm, will be working with emergency management, planning and public works staff of your local municipality to update your municipality's local Hazard Mitigation Plan.

Your knowledge on local hazards is critical to good planning: Participate in our online survey!

- Take the survey: <https://www.surveymonkey.com/r/KLB6RMX> to provide your opinion on local hazard events and their impact on you, your family, and the community. The survey will be open from October 1 through October 30.
- Contact your local city or town officials to learn how to provide comment on the draft municipal Local Hazard Mitigation Plan to ensure it reflects your experience and concerns.

Contact:

Dan Albrecht, CCRPC Senior Planner
dalbrecht@ccrpcvt.org | (802) 391-6809

or

Leroy Thompson, IEM Senior Planner
leroy.thompson@ieminc.com | 850-570-9867

Chittenden County Multi-Jurisdictional Hazard Mitigation Plan website:

<https://www.ccrpcvt.org/our-work/emergency-management/hazard-mitigation-plan/>

Attachment 4: Mitigation Actions

(S) Social	
Definition	Considerations
The public must support the overall mitigation implementation strategy and specific mitigation actions. The mitigation action is evaluated in terms of community acceptance and impact on the population.	<ul style="list-style-type: none"> • Community acceptance: will the action disrupt housing or cause the relocation of people? Is the action compatible with present and future community values? • Impact on population: will the proposed action adversely affect one segment of the population?
(T) Technical	
Definition	Considerations
It is important to determine if the proposed action is technically feasible, will help to reduce losses in the long term, and has minimal secondary impacts. This category evaluates whether the action is a whole or partial solution, or not a solution at all.	<ul style="list-style-type: none"> • Technical feasibility: how effective is the action in avoiding or reducing future losses? • Long-term solution: does the action solve the problem or only a symptom? • Secondary impacts: will the action create more problems than it solves?
A. Administrative	
Definition	Considerations
This category examines the anticipated staffing, funding, time, and maintenance requirements for the mitigation action to determine if the jurisdiction has the personnel and administrative capabilities to implement the action or whether outside help will be necessary.	<ul style="list-style-type: none"> • Staffing: does the jurisdiction have the capability (staff, technical experts, and training) to implement the action? • Funding allocated: does the jurisdiction have the funding to implement the action or can it readily be obtained? • Time: can the action be accomplished in a timely manner? • Maintenance/Operations: can the community provide the necessary maintenance? It is important to remember that most federal grants will not provide funding for maintenance.
(P) Political	
Definition	Considerations
This category considers the level of political support for the mitigation action.	<ul style="list-style-type: none"> • Political support: is there political support to implement and maintain this action? Have political leaders participated in the planning process so far? • Local champion or proponent: is there a respected community member willing to help see the action to completion? • Public and stakeholder support: is there enough public support to ensure the success of the action? Have all stakeholders been offered an opportunity to participate in the planning process?
(L) Legal	

Definition	Considerations
Whether the jurisdiction has the legal authority to implement the action or whether the jurisdiction must pass new laws or regulations is important in determining how the mitigation action can be best carried out.	<ul style="list-style-type: none"> • Commonwealth authority: does the Commonwealth have authority to implement the action? • Existing local authority: are proper laws, ordinances, and resolutions in place to implement the action? • Potential legal challenge: is there a technical, scientific, or legal basis for the mitigation action (i.e., does the mitigation actions “fit” the hazard setting)? Are there any potential legal consequences? Is the action likely to be challenged by stakeholders who may be negatively affected?
(E) Economic	
Definition	Considerations
Economic considerations must include evaluation of the present economic base and projected growth. Cost-effective mitigation actions that can be funded in current or upcoming budget cycles are more likely to be implemented than actions requiring general obligation bonds or other instruments that would incur long-term debt to a community.	<ul style="list-style-type: none"> • Benefits of action: what financial benefits will the action provide? • Cost of action: does the cost seem reasonable for the size of the problem and the likely benefits? What burden will be placed on the tax base or local economy to implement this action? • Contribution to economic goals: does the action contribute to community economic goals, such as capital improvements or economic development? • Outside funding required: are there currently sources of funding that can be used to implement the action? Should the action be considered “tabled” for implementation until outside sources of funding are available?
(E) Environmental	
Definition	Considerations
The impact on the environment is an important consideration because of public desire for sustainable and environmentally healthy communities. Also, statutory considerations, such as the National Environmental Policy Act (NEPA), need to be kept in mind when using federal funds.	<ul style="list-style-type: none"> • Impact on land/water bodies: how will this action impact land/water? • Impact on endangered species: how will this action impact endangered species? • Impact on hazardous materials and waste sites: how will this action impact hazardous materials and waste sites? • Consistency with community environmental goals: is this action consistent with community environmental goals? • Consistency with federal laws: is the action consistent with federal laws, such as NEPA?

Prioritization Worksheet

JURISDICTION: Westford
Lalley, ZA

Person(s) Completing Form: Kate

Date Submitted: 1-11-2022

Project Description			Project Benefits								
A	B	C	1	2	3	4	5	7	8	9	
Project #	Mitigation Action	Hazard/ Project Type*	Protect Life, Safety, & Property	Funding is Available	Matching Funds Available	Strong BCA	Environment al Benefits	Technically feasible	Short- term or Long- term	TOTAL SCORE	Ranking
Category A	Continue to improve capabilities of existing road and SW management infrastructure	SIP									
A-1	Culvert upgrades		5	5	2	2	5	5	5	29	H
A-2	Drainage improvements		4	4	2	2	5	5	4	26	H
A-3	Road improvements		5	3	1	2	5	4	3	23	H
Category B	Complete geomorphology assessment and address identified vulnerable infrastructure	LPR/NSP									
	Adopt River Corridor Regulations based on completed fluvial geomorphology assessment		4	2	1	2	5	3	3	20	M
Category C	Implement Roads Stormwater Management Plan	LPR/SIP/NSP									
C-1	Develop Roads Stormwater Management Plan		4	2	1	2	5	3	3	20	M
C-2	Begin Roads Stormwater Management Plan Implementation		4	2	1	2	5	3	3	20	M