









ANNEX 9: TOWN OF JERICHO

	Chartered: 1763
	Land Area: 35.39 sq. mi.
	2020 Population: 5,199
	Government Address: 67 Vermont Rte. 15, Jericho, Vermont 05465
	Households: 1,987
	Mitigation Focus: Severe Winter Storm, Flooding, Fluvial Erosion, Severe Rainstorm

This section presents the jurisdictional annex for Town of Jericho, which provided the following information for the 2022 update to the *Chittenden County 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

9.1 HAZARD MITIGATION PLAN – POINT OF CONTACT

Table 9.1: Hazard Mitigation Planning Points of Contact, Town of Jericho

Type	Primary Point of Contact	Secondary Point of Contact
Name	John Abbott	Aaron Little
Title	Town Administrator	Emergency Management Director
Agency	Town of Jericho	Town of Jericho
Address	67 Vermont Rte. 15	67 Vermont Rte. 15
City, State, Zip	Jericho, Vermont 05465	Jericho, Vermont 05465
Phone	802-899-4936	802-477-3260
Email	jabbott@jerichovt.gov	Aaronjlittlemail@gmail.com

9.2 JURISDICTION PROFILE

- Geographic Region: Champlain Valley
- Persons per household: 2.62
- Persons per Square mile: 144.1
- Median Age: 40.6
- Elevations: Near sea level- 121 ft.

Location

The Town of Jericho is located in eastern Chittenden County and is bounded on the west by Essex and Williston, on the south by Richmond, on the east by Bolton and Underhill and on the north by Westford. It encompasses 35.39 square miles.

History

The town of Jericho has a connection with the neighboring town of Underhill. The area has three distinct village areas:

1. Jericho Corners: is home to the historic Old Red Mill and houses the Jericho Historical Society. It stands on Route 15 in the northwest part of the town, an area that extends from the Browns River crossing eastward to the post office and the Jericho Elementary School.
2. Jericho Center: is located to the southeast along Browns Trace that connects Rt. 15 to the Town of Richmond. It is home to the Jericho Country Store, the oldest continually operating general store in the State of Vermont.
3. Riverside: is located in the northeast part of Jericho on the border with Underhill also known as “the flats”. It is home to the Jericho Market, Brown’s River Middle School and largest undeveloped parcel in Jericho.

The *Town of Jericho Comprehensive Town Plan*, revised January 2, 2020, describes the relationship of the historical development pattern to the current development of the town:

“Jericho developed three distinct Village Centers – Jericho Center, Jericho Corners, and the Riverside area of Underhill Flats. Portions of each Village Center are on the National Register of Historic Places, and each Village Center is recognized as a “Designated Village Center,” a state of Vermont program that recognizes and encourages local efforts to revitalize Vermont’s traditional villages. Once designated, the community receives priority consideration for state grants and other resources. Recently, significant gains have been made in reestablishing the traditional importance of these Centers, with the influx of a variety of new businesses, renovation of historic properties, streetscape improvements, and upgrades to pedestrian infrastructure.”¹

Demographics, Economy, and Governance

The population has grown significantly between 1980 and 1990, growing at a faster rate than Chittenden County as a whole. Since 2000, the town has grown at a slightly slower, remaining largely unchanged since that time.

¹ Town of Jericho, Comprehensive Town Plan, revised January 2, 2020; p. 4. Retrieved at: https://ehq-production-us-california.s3.us-west-1.amazonaws.com/bfbb63baf286ecdc4b481c5604b75d3bb31ea2ef/documents/attachments/000/007/424/original/Town_Plan_All_Chapters_Final_1-2-20.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIBJCUK4Z04WUUA%2F20220315%2Fus-west-1%2Fs3%2Faws4_request&X-Amz-Date=20220315T140829Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=b295deb8aa1a2fd245a4acecc256bcf0087814995a94b3a244c9fe988060f9f1

The population is distributed relatively evenly throughout the town. Denser population concentrations occur along VT Route 15, Plains Road, Browns Trace Road and Raceway Road. Although there is limited commercial development along VT Route 15 and in Jericho Center, the overwhelming use of the landscape in Jericho is for residential and agricultural purposes.

Table 9.2: Demographics, Economy, and Governance in Town of Jericho

Demographics	Economy	Governance
Population Growth <ul style="list-style-type: none"> 1980: 3,575 1990: 4,302 2000: 5,015 2010: 5,009 2020: 5,104 2020-2030 – Projected Growth Rate: .08% 	<ul style="list-style-type: none"> Median household income (2019): \$106,658 Per capita income (2019): \$48,826 Number of Single Unit Residences: 2249 Population below poverty level (2019): 1.67% 	<ul style="list-style-type: none"> Select Board Town Administrator Town Clerk Town Planner Zoning Administrator Treasurer Justices of the Peace
Race and Ethnicity Percentage of population identifying as: <ul style="list-style-type: none"> White: 98.5% Asian/Pacific Islander: 0% Black/African American: 0.46% American Indian: 0.99% 		

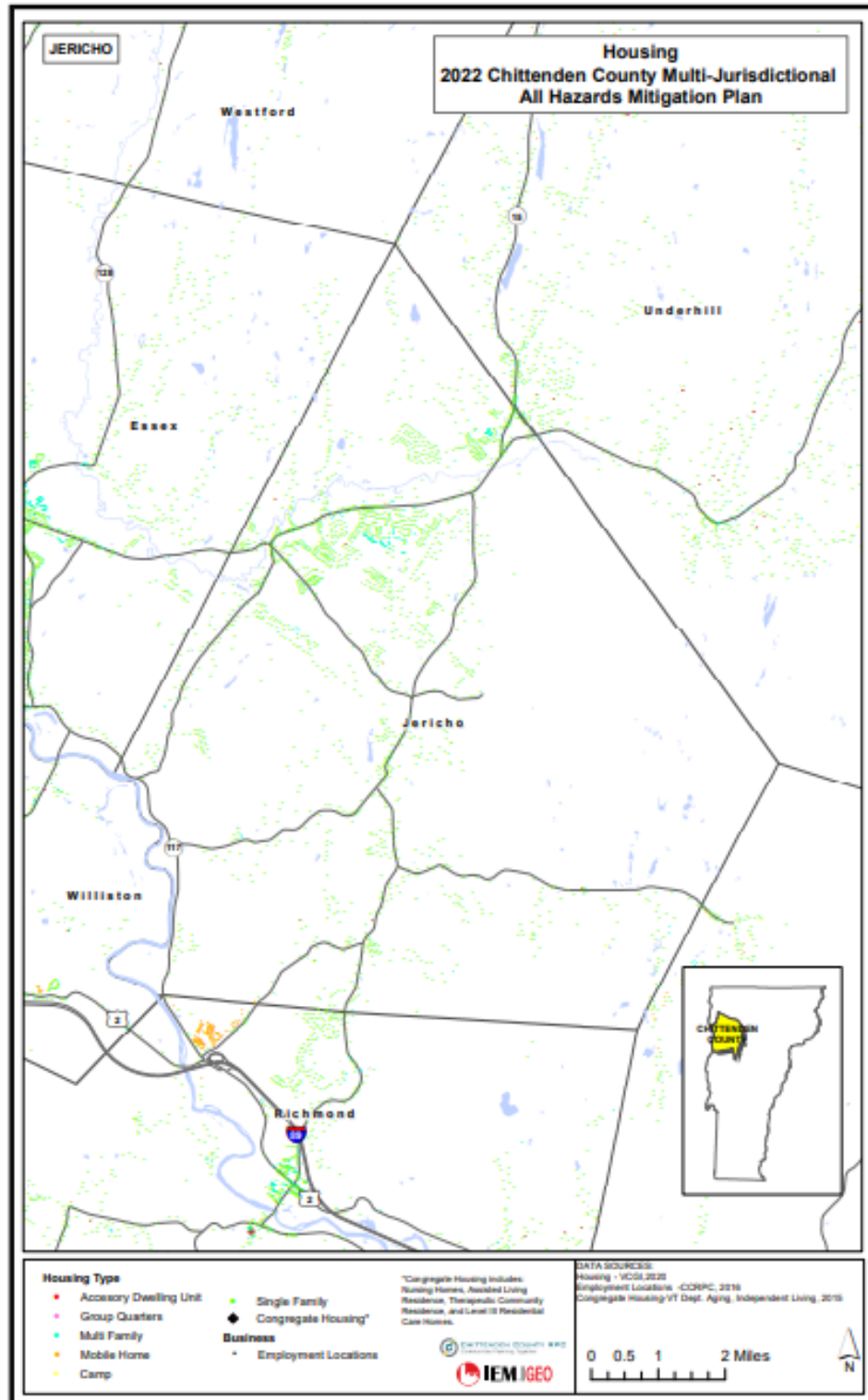


Figure 9.1: Housing and Employment, Town of Jericho²

²Chittenden County Regional Planning Commission, September 2021.

Built Environment and Community Lifelines

For the 2022 MHAHMP update, the critical facility categories used in the 2017 Plan were converted to FEMA's Community Lifeline categories.

Table 9.3: Number of Community Lifelines and Critical Assets in Town of Jericho

SECTOR	Safety and Security	Food, Water, Shelter	Health and Medical	Energy	Communications	Transportation	Hazardous Materials	Education	Cultural/Historical	High Hazard Dams
No. Assets	4	1	0	1	3	1	0	4	1	0

Safety and Security

In the Town of Jericho there is one fire station and one Emergency Operations Center. This includes assistance from the State Police forces, and Essex Rescue, Richmond Rescue in South Jericho, and Williston Rescue. The Town includes two government and military assets as Community Lifelines.

Food, Water, Shelter

In the Town of Jericho, Hazus has identified one water service provider located in Jericho. There are no food or shelter locations referenced in Hazus data.

Health and Medical

While there are no health or medical facilities located in the Town of Jericho for people, Hazus has identified one veterinary hospital/clinic inside the town.

Energy

There are two solar arrays that have been installed into the town that power around 300 homes. These are not considered critical facilities but are considered a main power supply to the homes that utilize them. Along with the solar arrays, Central Vermont Public Service Corporation is the local service provider for electrical power in the town, which is considered as a critical lifeline asset.

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.

Three local communications providers are found in the town. FairPoint Communications, Waitsfield/Champlain Valley Telecommunication, and Burlington Telecommunication.

Transportation

There is a designated “Park and Ride” lot that is part of the Chittenden County Transit Authority (CCTA) route system located off of Route 15. The transit system would be a vital asset in a disaster requiring evacuation of residents or post-disaster transportation services.

Hazardous Materials

While Hazus does not document any facilities or storage sites that have hazardous materials inside the Town of Jericho, there are a number of facilities that have gasoline and other hazardous materials in quantities over 10,000 lbs.

Education

There is an elementary school (K-4), a middle school (Grade 5-8) and a high school (Grade 9-12) located in the Town of Jericho. The Mount Mansfield Unified Union School District administrative offices are also housed here.

Recreational, Cultural and Historic Sites and Assets

The Mills Riverside Park is located in the town. There are also some Jericho and Underhill land trusts that are shared between the communities.

The Old Red Mill stands on the west side of the village of Jericho, on the north side of Vermont Route 15 just west of its crossing of the Browns River, which provided the mill's power. The mill, located on the river's west bank, was built in 1856 and is a significant local landmark and representation of the community's early mercantile and agricultural history. The mill and house have been adapted into a museum and local history center by the local historical society.

Natural Environment

The Town of Jericho is surrounded by land cover consisting of tree canopy and grass/shrubs. The lowest elevations within the town are primarily along the rivers and streams.

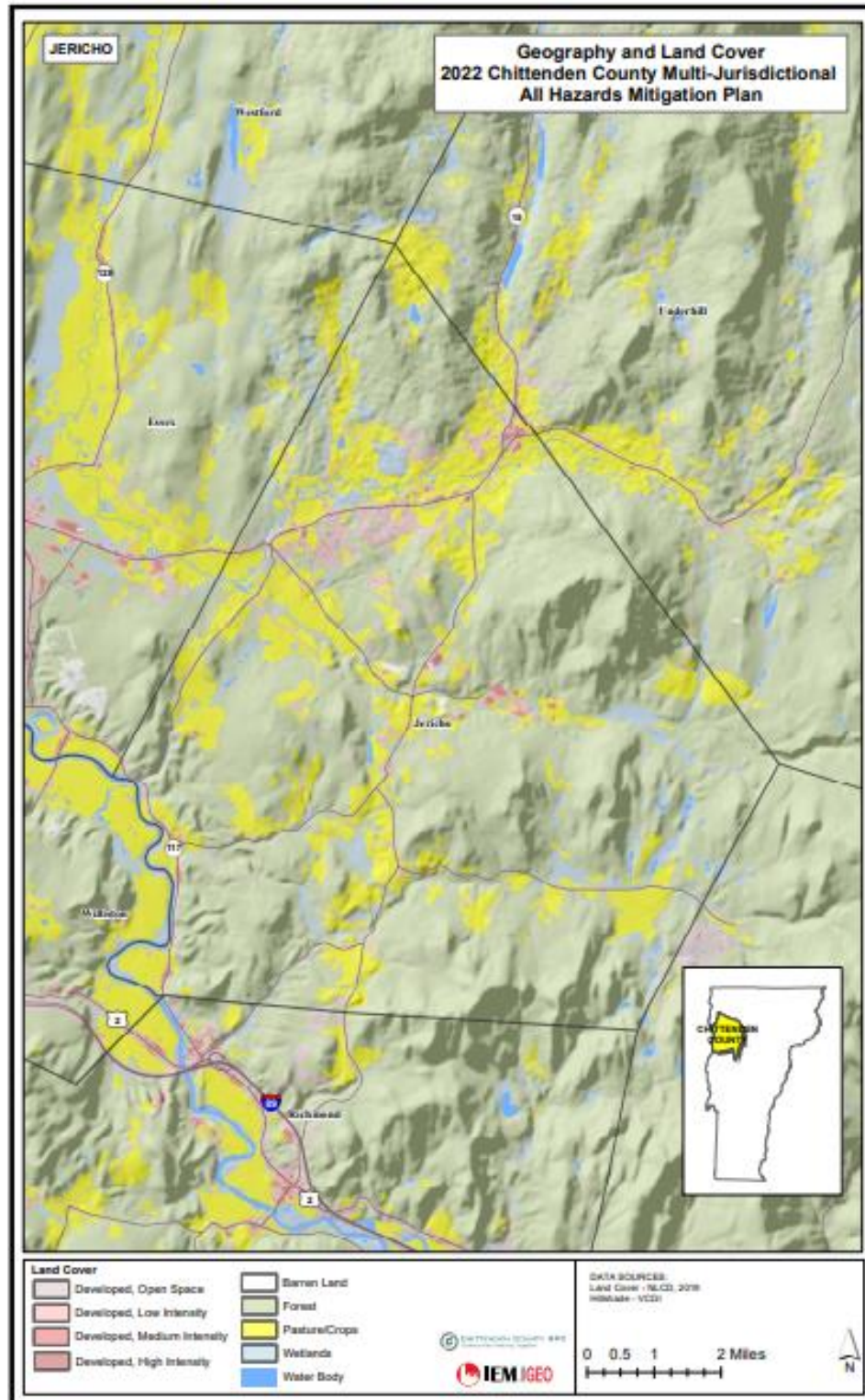


Figure 9.2: Geography and Land Cover, Town of Jericho³

³ Chittenden County Regional Planning Commission, September 2021.



⁴ Chittenden County Regional Planning Commission, September 2021.

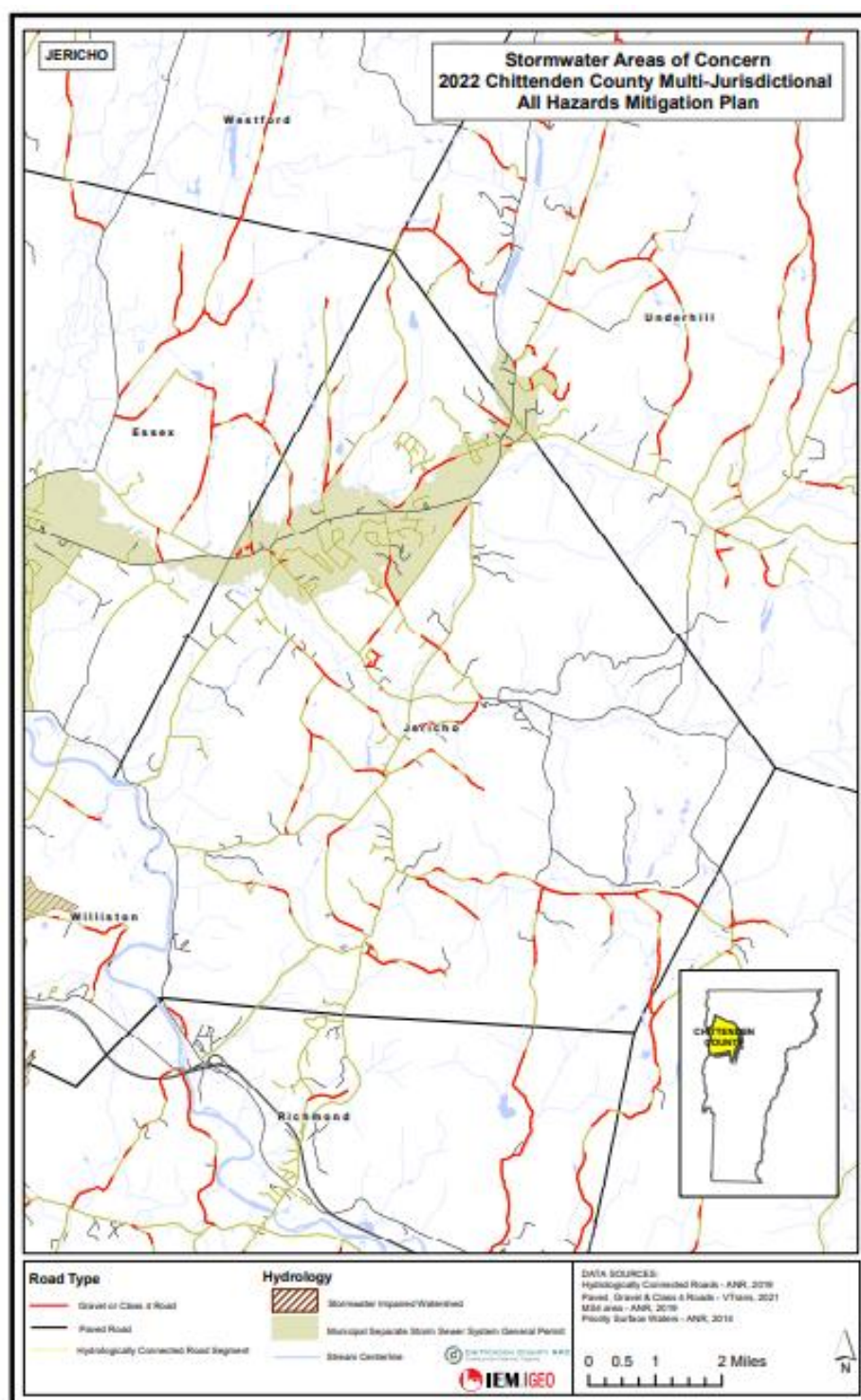


Figure 9.4: Stormwater Management System, Town of Jericho⁵

⁵ Chittenden County Regional Planning Commission, September 2021.

Growth and Development Trends

The population of Jericho is growing at slow, but steady pace, averaging a .02%-0.3% population change every decade. Development has maintained the same pace, consistent with the needs of the growing town.

Table 9.4: Population Trends, 2010-2020

2010	2020	Net Change 2010-2020	Percent Change 2010-2020
5,009	5,104	+95	.02%

Table 9.5: Jericho Population Projections, 2020 to 2030

2020	2030	Net Change 2000 -2020	Percent Change 2000-2020
5,104	5,254	150	.03%

The Town of Jericho Comprehensive Town Plan, revised January 2, 2020 summarizes the current conditions related to development pressures in the jurisdiction:

“As the core towns of Chittenden County have built up, development pressure has increased on the county’s outlying towns, including Jericho. At this juncture Jericho stands at a crossroads. While change is inevitable, the Town can plan for and direct these development pressures so that it complements and enhances, rather than detracts from, Jericho’s existing character and community. The manner in which this Plan and the accompanying Land Use Regulations are developed and implemented will determine how the Town reacts to these inevitable pressures and their impact on the appearance of, and quality of life in, Jericho.”⁶

The town conducted a study in 2012, *Town of Jericho Build Out and Common Impacts Analysis*, to provide guidance in understanding “how additional residential and commercial development will impact energy use, population, water use, auto emissions and traffic.”⁷ Six scenarios were

⁶ Town of Jericho Comprehensive Town Plan, revised January 2, 2020, p. 5. Retrieved at: https://ehq-production-us-california.s3.us-west-1.amazonaws.com/bfbb63baf286ecdc4b481c5604b75d3bb31ea2ef/documents/attachments/000/007/424/original/Town_Plan_All_Chapters_Final_1-2-20.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIBJCUK4Z04WUUA%2F20220315%2Fus-west-1%2Fs3%2Faws4_request&X-Amz-Date=20220315T140829Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=b295deb8aa1a2fd245a4acecc256bcf0087814995a94b3a244c9fe988060f9f1

⁷ Town of Jericho Comprehensive Town Plan, May 2012, p. 1. Retrieved at: <https://s3-us-west-1.amazonaws.com/ehq-production-us->

developed to visualize how zoning could be implemented or changed in the future and what effect those changes would have on the community. The scenarios considered current zoning and subdivision standards as well as alternative models that reflected changes in the zoning and land use standards.

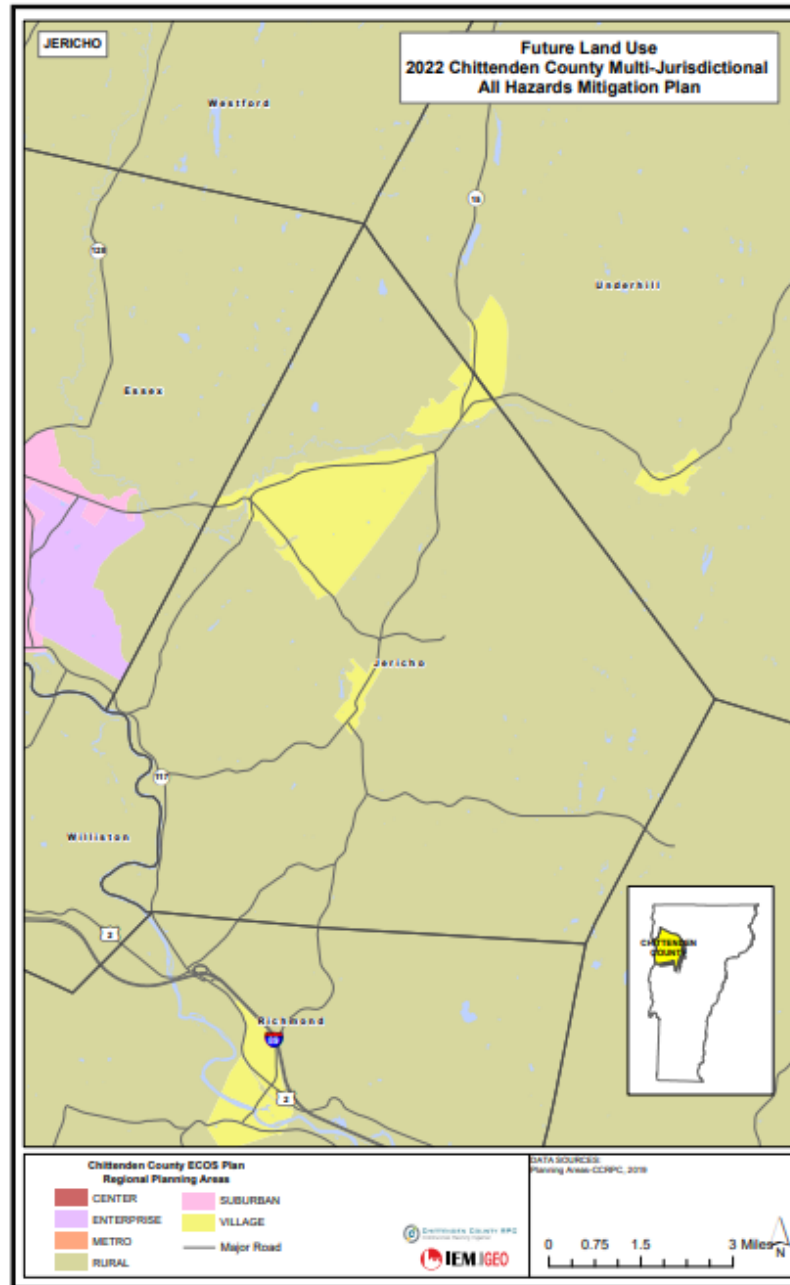


Figure 9.5: Future Land Use, Town of Jericho⁸

[california/f163f5353f4979f7d87a8d79cbf8ced86e93376c/documents/attachments/000/002/963/original/Final_Build_Out_Report_May_2012.pdf?1540926560](https://www.vermont.gov/files/landuse/f163f5353f4979f7d87a8d79cbf8ced86e93376c/documents/attachments/000/002/963/original/Final_Build_Out_Report_May_2012.pdf?1540926560)

⁸Chittenden County Regional Planning Commission, September 2021.

9.3 JURISDICTION PLANNING PROCESS

Table 9.5: 2022 Participants in Hazard Mitigation Planning, Town of Jericho

Name	Position/Title	Department/Agency
John Abbot	Town Administrator	Town of Jericho
Aaron Little	Emergency Management Director	Town of Jericho
Adam Magee	Road Crew Foreman	Town of Jericho
Katherine Sonnick	Town Planner	Town of Jericho
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 Hazard Mitigation Plan Review and Update Committee. The county also identified the following tasks as part of its mitigation planning responsibilities:

- 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
- 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 MJAHMP update. Notification of the Draft Plan release was made through the same CCRPC web link. Documentation of the public survey and draft plan review is included in **Attachment 3** of this annex.

9.4 JURISDICTION-SPECIFIC HAZARD EVENT HISTORY

The Town of Jericho has been included in fourteen Federal Disaster or Emergency Declarations since 1990, all but two as a result of severe storms/rainstorms or flooding.

Table 9.6: Federal Disaster and Emergency Declarations (1990-2021), Town of Jericho⁹

⁹ FEMA, Federal Disaster Declarations. Retrieved at: <https://www.fema.gov/disaster/declarations>

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)
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 9.7: Summary of Storm Events in Town of Jericho, 1950– May 31, 2021¹⁰

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	0	0
Extreme Cold/Wind Chill	5	0	0	0	0	0	0
Flash Flood	4	0	0	0	0	1,515,000	0
Flood	9	0	0	0	0	78,000	0
Frost/Freeze	2	0	0	0	0	0	25,000
Hail	3	0	0	0	0	0	0
Heat	2	0	0	0	0	0	500,000
Heavy Rain	6	0	0	0	0	50,000	0
Heavy Snow	5	0	0	0	0	107,000	0
High Wind	25	0	0	1	0	2,161,000	0
Ice Storm	1	0	0	0	0	200,000	0
Lightning	2	0	0	0	0	5,000	0
Strong Wind	35	0	0	0	0	412,000	0
Thunderstorm	11	0	0	0	0	216,000	0
Winter Storm	90	0	0	2	0	1,658,000	15,000
Winter Weather	98	1	0	0	0	683,500	0
Total	308	1	0	3	0	\$7,085,500	\$540,000

Table 9.8: Significant Hazard Events Identified by Town of Jericho, 2017-2021

¹⁰ NOAA, National Centers for Environmental Information, Storm Events Database, 1950 – May 31, 2021.

Date	Hazard	Event and Description
05/04/2018	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.
08/12/2017	Thunderstorm Wind	Surface low pressure moved east along the international border Saturday afternoon (August 12th) and Saturday night along with an associated cold front. Marginal instability ahead of these cold front developed showers and thunderstorm in the Champlain Valley which intensified as they moved across VT.

High Hazards of Concern to the Jurisdiction

The Town of Jericho indicated that Severe Winter Storms, and Flooding were the highest natural hazards of concern for the jurisdiction. These hazards are fully profiled in Section 4, Base Plan, and additional information from the 2017 Plan that is still relevant is included in this update.

Severe Winter Storm

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/Flash Flood

A simple GIS intersection analysis reveals that portions of town roads are 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.

Figure 9.7 shows the current extent of FEMA-FIRM 100-year flood hazard areas for the town. Flood zones are located along the jurisdiction's waterways.

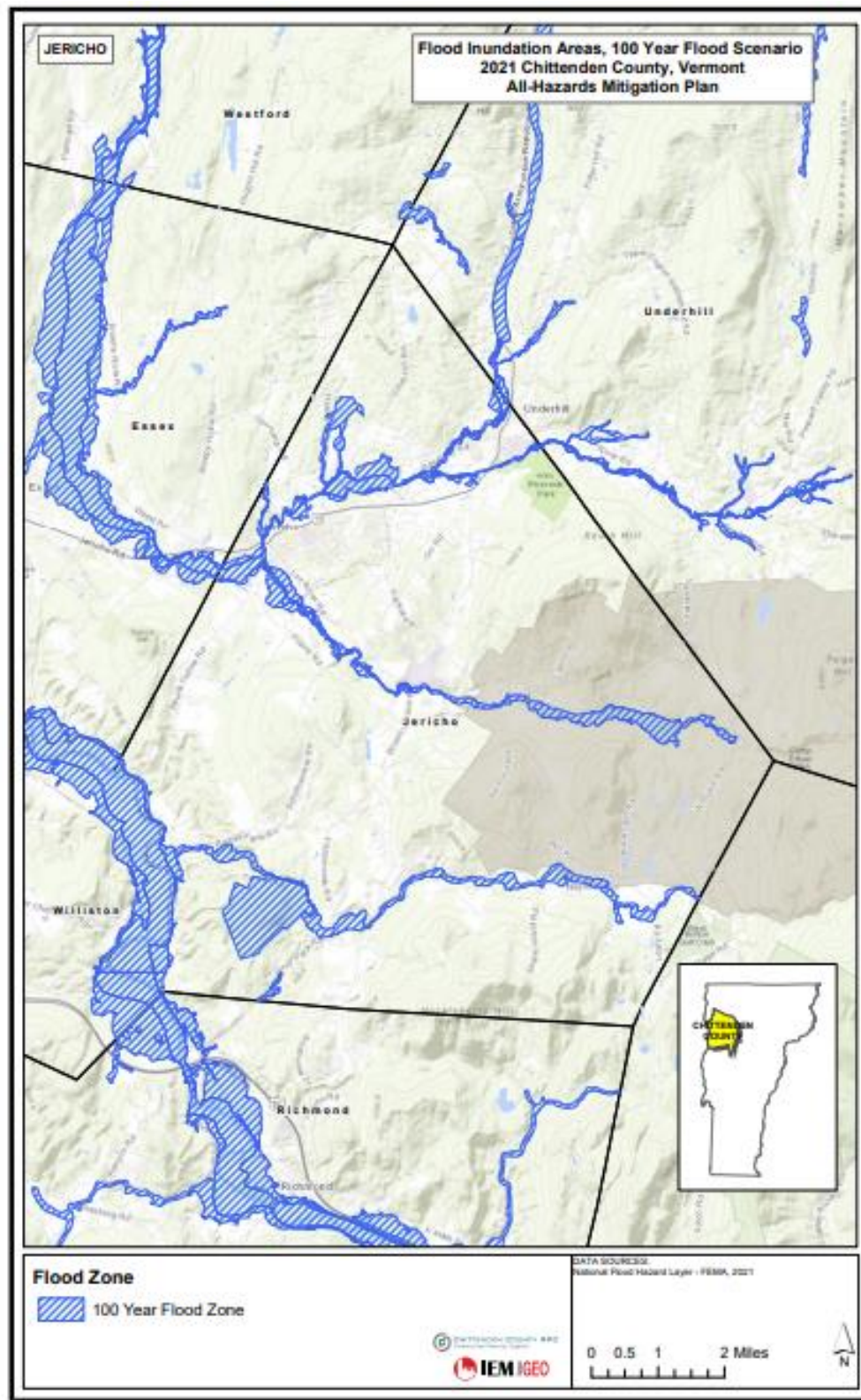


Figure 9.6: Town of Jericho 100-Year Flood Scenario¹¹*Fluvial Erosion*

During development and adoption of both the 2005 and 2011 *MJAHMP*, threats from stream erosion were identified as Fluvial Erosion Hazard (FEH) Areas through the analytical lens of Stream Geomorphic Assessment (SGA). As of the 2017 Plan update, SGA work had been completed on the Browns River, the Lee River, Alder Brook and Mill Brook, as well as on portions of Abby Brook, The Creek and portions of the Governor Peck tributary of the Winooski. Phase 2 SGA based River Corridor Protection Areas (formerly Fluvial Erosion Hazard Areas) were developed for those portions of streams where SGA was completed. Other tributaries to the Winooski River, the Lee River and the Browns River, along with additional portions of Abby Brook and The Creek that did not have Phase 2 SGA work, but have a watershed area greater than two square miles, would also be included in the River Corridor Protection Area and/or River Corridor.

Dam Failure

One dam is located within the Town; however, it is not considered to be a high hazard dam of concern.

Table 9.9: Dams in Town of Jericho, as of May 2021

Name	Impoundment Capacity (acre-feet)	Use	Owner	Hazard Class
Jericho-1	N/A	N/A	Unknown	N/A

Human Infectious Disease

The 2017 *MJAHMP* noted that “epidemic” (listed as a Societal Hazard, but moved to the Natural Hazard section in the 2022 Plan update), identified as a threat in the 2011 Plan, was considered to be a low risk in 2017. The risk and vulnerability from this hazard have now been elevated since the COVID-19 pandemic and the links to vulnerability of the population’s health and safety, as well as the healthcare system has been well-documented. The COVID-19 event pointed out the significant and long-term impacts to the area’s economy and general well-being of the population. In addition, Vermont’s opioid epidemic highlights the relationship between drug use and crimes related to drug use which, while still rare compared to the situation in major cities, are a major concern for residents.

Non-Natural Hazards

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

¹¹ Chittenden County Regional Planning Commission, September 2021.

Table 9.10: Technological and Societal Hazards of Concern to the Town of Jericho

Hazard	Risk/Vulnerability Issue
Economic Recession	An economic recession will have cascading effect on health, safety, and the environment. In a recession, property owners may not be able to maintain their property, which is then more vulnerable to natural hazards. In addition, the impacts of any hazard event have the potential to impact the economy, resulting in both direct and indirect effects on the economy.
Hazardous Substances	According to Vermont Emergency Management, there are several reported hazardous material storage sites in Jericho. Sites that contain large amounts of fuel or store what VEM calls Extremely Hazardous Substances are more likely to cause significant problems in a hazardous materials incident. Facilities that store fuel in excess of 10,000 lbs. include General Dynamics Armament and Technical Produces, Vermont Army National Guard (Ethan Allen Firing Range), S.B. Collins, Comcast, and Green Mountain Power (Underhill Substation).
Power Loss	Jericho is vulnerable to power loss because the population is dispersed and repairing utility infrastructure in rural areas can take more time. Power loss will also affect communications failure and water system failure.
Telecommunications Failure	Though cellular service is somewhat more reliable than it was when the previous plan was update, this issue remains significant for residents in rural areas.
Transportation Infrastructure Failure	Of two bridges inventoried by the Vermont Department of Transportation, 7 in Jericho are rated functionally deficient, and 1 is considered structurally deficient. Two bridges are rated as "Scour Critical" with regards to fluvial undermining of bridge structure. Figure 9.3 depicts culverts identified as geomorphically-incompatible either due to inadequate size or improper alignment.
Water System Failure	Only a limited portion of Jericho has municipal water service, and many town residents and businesses rely on well water, so power loss also results in a water service loss.

It should be noted that the four natural hazards of highest concern - flooding, fluvial erosion, severe rainstorm, and severe winter storm—could be the cause of the highest-rated technological hazards, power loss and telecommunications failure. Winter storms are the highest rated hazard for Jericho, due in large part to their widespread nature and frequent occurrence.

9.5 HAZARD RISK RANKING

After developing hazard profiles, the Town of Jericho 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.X, Base Plan](#). The Hazard Risk Ranking scores for Town of Jericho 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. Non-natural hazard profiles are presented in [Volume II](#) of this Plan.

Table 9.11: Hazard Risk Ranking Summary Natural Hazards, Town of Jericho

Hazard	Total Probability Score	Overall Risk Score	Total Consequence Score	Hazard Ranking
Flood	9	4	36	Medium
Fluvial Erosion	9	4	36	Medium
Severe Winter Storm	6	5	30	High
Severe Rainstorm	6	5	30	Medium
Extreme Temperatures	4	4	16	Low
Invasive Species	4	4	16	Low
Human Infectious Disease	5	3	15	Low
Wildfire	3	3	9	Low
Dam/Levee Failure	[Not Ranked]			

Table 9.12: Hazard Risk Ranking Summary Technological Hazards, Town of Jericho

Hazard	Total Probability Score	Overall Risk Score	Total Consequence Score	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
Natural Gas Service Loss	3	1	3	Low
Other Fuel Service Loss	5	1	5	Low
Sewer Service Loss	3	1	3	Low

Table 9.13: Hazard Risk Ranking Societal Hazards, Town of Jericho

Hazard	Total Probability Score	Overall Risk Score	Total Consequence Score	Hazard Ranking
Economic Recession	7	4	28	Medium
Crime	4	5	20	Medium
Key Employer Loss	3	4	12	Low
Civil Disturbance	4	2	8	Low
Terrorism	6	1	6	Low

9.6 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 9.14: Typical Vulnerabilities of Natural Hazards of Highest Concern, Town of Jericho

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
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

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
Flooding	<ul style="list-style-type: none"> • Temporary closures of roads 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 closure 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
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
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 • Damages to individuals' properties and businesses
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
Wildfire	<ul style="list-style-type: none"> • Damages to private property 	<ul style="list-style-type: none"> • Environmental damage and loss • Economic loss

Relative to the county as a whole, the Town of Jericho 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 9.15: Town of Jericho – Typical Vulnerabilities of Technological Hazards of Highest Concern

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
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
Major Transportation Incident	<ul style="list-style-type: none"> • Temporary closures of transportation infrastructure • Injuries, deaths 	<ul style="list-style-type: none"> • If major event, potential long-term closure of infrastructure
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
Power Loss	<ul style="list-style-type: none"> • Temporary loss of electrical service • Temporary impacts to vulnerable individuals • Damage to public infrastructure 	<ul style="list-style-type: none"> • If extended event, damage to perishable good or business income • 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
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
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
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

Relative to the County as a whole, the Town of Jericho 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 9.16: Town of Jericho – Typical Vulnerabilities of Societal Hazards of Highest Concern

Hazard	Typical Vulnerabilities	Potential Cascading Vulnerabilities
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
Crime	<ul style="list-style-type: none"> Increased demands on police services and social services 	<ul style="list-style-type: none"> Injuries Deaths
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"> Effects increased if event is of extended duration
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
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.

The Town *MJAHMP* Planning Committee noted the following as critical assets to the jurisdiction:

- Two solar arrays were installed in 2021 in a cooperative program with Encore Renewables and VEC; one constructed on the capped former town dump and the other in an abandoned gravel pit.
- The Mobbs Farm is being conserved in conjunction with the Vermont Land Trust. The Trails Committee has inventoried all of the easements for access to recreational trails.

Additional town assets and related vulnerabilities are described in relation to population, built environment, natural environment, the economy, and cultural and historical assets.

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 Jericho is in an area of lowest vulnerability.

Table 9.17: Vulnerable Population in the Town of Jericho, by Age Group

Category	Percentage of Population
Children Under 5	7.4%
Population age 65+	14.8%
Disabled Population	5.4%
Population Below Poverty Level	4.5%

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. Based on information provided by the jurisdiction the following Community Lifeline sites or facilities potentially at risk:

The statistical overview of roads in the Town of Jericho shows the range of road types within the town, from highways to 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 the purpose of highway maintenance and state aid.

Table 9.18 Town of Jericho, High crash road sections 2010-2014

Road	Road Type	Section (miles)	Severity Index (\$/cash)
VT 117	Minor Arterial	0.269-0.569	\$40,718

Table 9.19 Town of Jericho, Highway mileage by class

Class 1	Class 2	Class 3	Class 4	State Hwy	Fed Hwy	Interstate	Total 1, 2, 3, State Hwy
	20.52	41.48	2.92	6.68	-	-	68.68

Table 9.20 Town of Jericho, Highway mileage by surface type

Paved	Gravel	Soil or Graded	Unimproved	Impassable	Unknown	Total
37	30	3		2		72
Total Known	Total Unpaved	% Paved	% Unpaved			
72	35	51%	49%			

Table 9.21 Town of Jericho, Fuel storage sites in excess of 10,000 lbs.

Owner/Facility	Type of Substance
Chittenden Mills Beverage	Gasoline
General Dynamics Armament and Technical Products	Fuel Oil (No 2)
General Dynamics Armament and Technical Products	Propane
Jericho Center Market	Gasoline
Vermont Army National Guard-Ethan Allen Firing Range	Gasoline
Vermont Army National Guard-Ethan Allen Firing Range	Propane
Vermont Army National Guard-Ethan Allen Firing Range	Diesel Fuel
Vermont Army National Guard-Ethan Allen Firing Range	Heating Fuel Oil
S.B Collins (Jolley Riverside)	Diesel Fuel
S.B Collins (Jolley Riverside)	Fuel, Gasoline
S.B Collins (Jolley Riverside)	Kerosene
Comcast	Lead
Green Mountain Power Underhill Substation	Lead
Jericho Market	Gas Station

Table 9.22 Town of Jericho, extremely hazardous substance storage sites

Owner/Facility	Type of Substance
General Dynamics Armament and Technical Products- Ethan Allen Firing Range	Battery Acid
RCC Jericho	Lead Acid Batteries
RCC Jericho	Sulfuric Acid
Verizon Wireless	Sulfuric Acid

Table 9.23: Town of Jericho, Bridges located in River Corridor Protection Areas (RCPA), River Corridors (RC), or Special Flood Hazard Area (SFHA)

Number of Structures in RCPA (FEH)	Number of Insufficient Structures in RCPA	Number of Structures in River Corridor	Number of Insufficient Structures in RC	Number of Structures in SFHA	Number of Insufficient Structures in SFHA
24	8	20	3	22	6

Table 9.24 Town of Jericho, Culverts with a Geomorphic Compatibility Rating of “Mostly Incompatible” or “Incompatible”

Bankfull Width	Compatibility Score	Location	Road Name	Stream Name
41.67	5	.5 Miles NZ Brown Trace Rd	Plains Rd	Unnamed
45.75	6	Governor Peck Rd. Crossing	Governor Peck Rd	Governor Peck Rd. Tributary
64.71	7	@ Junction of Skunk Hollow Road & Route 117	Route 117	Trib. to Winooski River
55.08	7		Governor Peck Rd	Trib. to Winooski River
22.22	8	Jct. W/ Lafayette	Lee River Rd	Unnamed
31.00	8	.1 Miles W Brown Trace Rd	Packard Rd	Unnamed
62.94	8	Just above Chicken Farmer	Barber Farm Rd	Trib. to Mill Brook
62.73	9	Junction with No Main St	Route 15	Unnamed
38.22	9	At Bridge #6 Sign	Route 117	Trib. to Winooski River
19.43	9	Junction with Hanley Ln	Cilley Hill Rd	Unnamed
16.40	9	Jct. with entrance to school	Browns Trace	Unnamed
18.52	9	.5 Miles S VT-15	Browns Trace	Unnamed
33.12	9	Farm field below route 117 culvert	Private Farm Field	Trib. to Winooski River
28.57	10	Upper-most crossing of Governor Peck Rd	Governor Peck Rd	Governor Peck Rd. Tributary
28.18	10	.75 Miles N Cilley Hill Rd	Hanley Ln	Unnamed

Figures 9.8 illustrates the historical development pattern of the town, including the proximity to the 100-year floodplain, River Corridors and River Streams. Analysis of this pattern indicates that most residential and non-residential development is clustered in valleys or low-lying areas; however, other than the Winooski River area, they are not typically located in SFHAs or River Corridors.

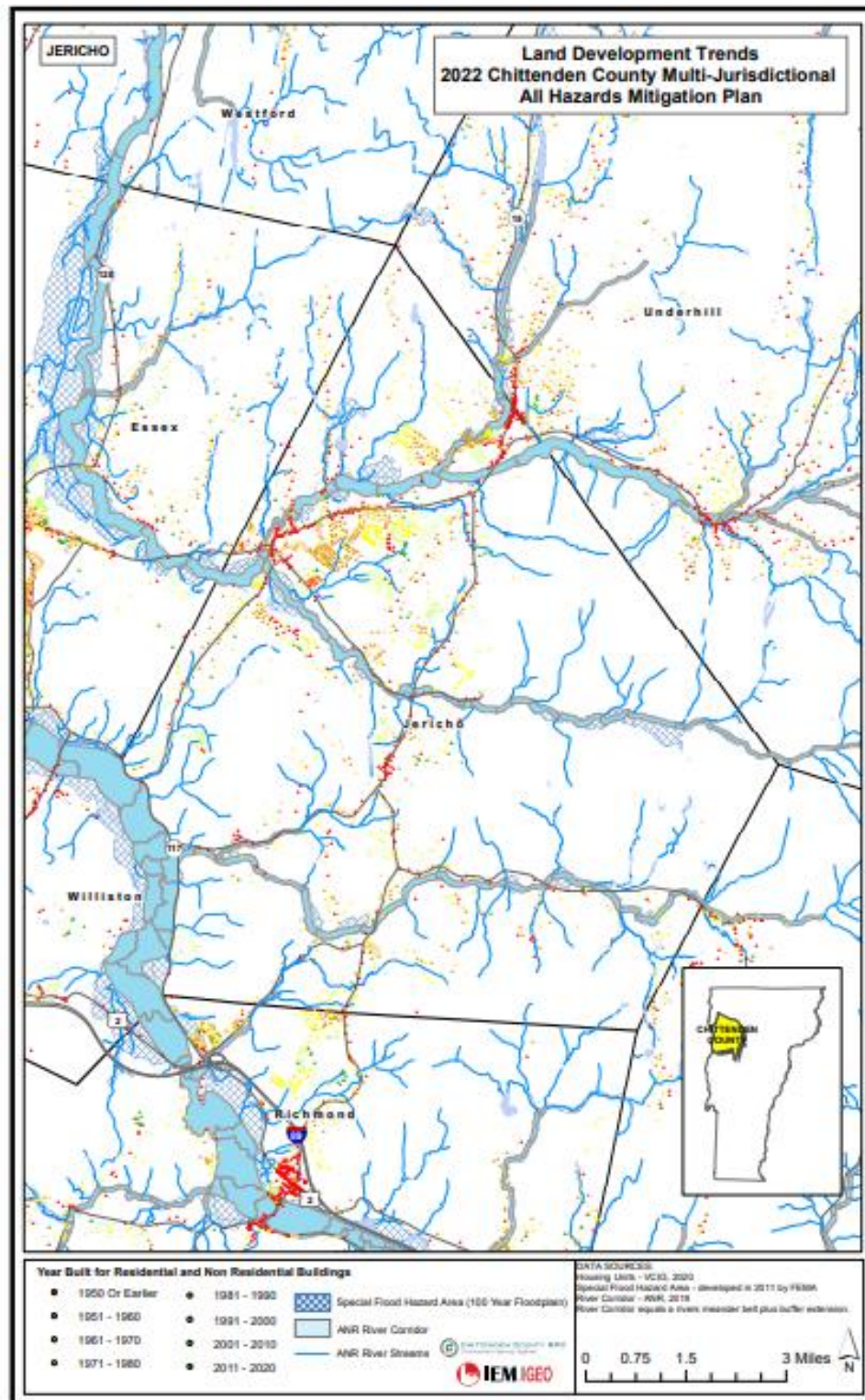


Figure 9.7: Land Development Trends, Town of Jericho- 1950-2020¹²

¹² Chittenden County Regional Planning Commission, September 2021.



¹³ Chittenden County Regional Planning Commission, September 2021.

Table 9.25: Critical Facilities Exposed to FEMA Floodplains, Town of Jericho

Total Facilities	In 100-year Floodplain	In 500-year Floodplain
1	1 School	0

Historical/Cultural Assets

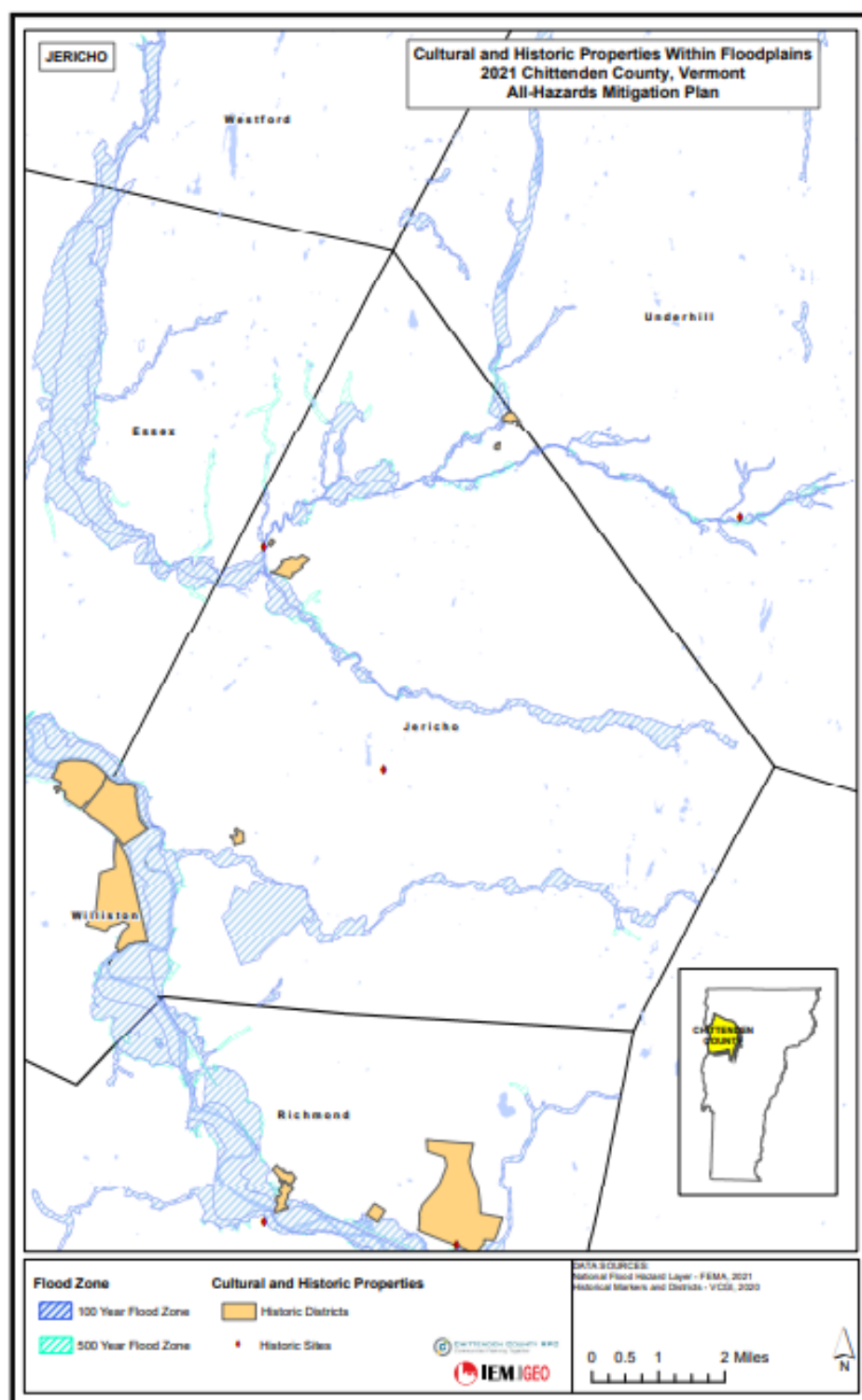


Figure 9.9: Cultural and Historic Properties Exposed to FEMA Floodplains, Town of Jericho¹⁴

¹⁴ National Flood Hazard Layer, FEMA 2021; Vermont Center for Geographic Information, 2022.

9.7 CAPABILITY ASSESSMENT

Capabilities Assessment Summary Ranking and Gap Analysis

Planning and Regulatory

The Town of Jericho has identified the following planning and regulatory capabilities.

Table 9.26: Summary of Planning Regulatory Capabilities, Town of Jericho

Comprehensive Plans	X
Capital Improvements Plans (Highway Dept.)	X
Economic Development Plan	
Local Emergency Operations Plan	X
Continuity of Operations Plan	X
Transportation Plan (Town Plan, MRGP, Bridge Capital)	X
Stormwater Management Plan	X
Community Wildfire Ordinances	
Zoning Ordinance	X
Subdivision Ordinance	X
Total	8

The Town identified the following areas for enhancement of its planning and regulatory capabilities:

- Town Planner has received a grant to assess storm water management in our 3 town “centers” at Riverside, Jericho Center and Jericho Corner.
- Hiring of a grant researcher, originator and manager.

Administrative and Technical Capabilities

The Town of Jericho has identified the following administrative and technical capabilities.

Table 9.27: Summary of Administrative and Technical Capabilities, Town of Jericho

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	X
Planners/ Engineer(s) with an understanding of natural and/or manmade hazards	X
Floodplain manager Mutual Aid Compacts	
Surveyor(s) Building Inspection	X

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

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

- Use a staff grant writer to better support funding and/or position creation.
- Floodplain manager, climate scientists, GIS mapping and warning system development would also benefit the community.

Fiscal Capability

The Town of Jericho has identified the following fiscal capabilities.

Table 9.28: Summary of Fiscal Capabilities, Town of Jericho

Capital improvements project funding	X
Authority to levy taxes for specific purposes	X
Fees for water, sewer, gas, or electric services	X
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	Z
Community Development Block Grant (CDBG)	
Other Federal funding programs, Historical Preservation	X
State funding programs	X
Public/Private partnership funding sources	X
Total	9

The Town of Jericho has identified no additional areas for improvement in fiscal capabilities at this time.

Program/Organization Capabilities

The Town of Jericho has moderate program and organizational capabilities that currently support hazard mitigation.

Table 9.29: Summary of Program/Organization Capabilities, Town of Jericho

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	X
Other	
Total	4

The Town of Jericho has identified no additional areas for improvement in program and organizational capabilities at this time.

NATIONAL FLOOD INSURANCE PROGRAM CONTINUED COMPLIANCE

Jericho has participated in NFIP regular program since 1981 and has a designated Floodplain Manager. The last Community Assistance Contract (CAC) was conducted on April 6, 2016, with no outstanding deficiencies. There are (21) NFIP policies with total insurance coverage of \$432,500; and there is one **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. This includes:

- Identifying 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 city 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, Underhill 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 9.30: National Flood Insurance Program Status, Town of Jericho

Current Effective 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
08/04/2014	15	12,755	4,165,600	7	62,628	1

Repetitive loss properties are public or private buildings insured under the National Flood Insurance Program that have made at least two insurance claims of more than \$1,000 each during a ten-year period. According to the National Flood Insurance Program there is one repetitive loss properties located in Jericho.

Repetitive Loss Properties By Type

Community Name	County Name	Mitigated	Occupancy ¹
JERICO, TOWN OF	CHITTENDEN COUNTY	NO	OTHR-NONRES

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.

Table 9.31: Capability Assessment Summary Ranking for Town of Jericho

Planning and Regulatory	Administrative and Technical	Fiscal	Education and Outreach
High	Low	High	Moderate

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

- The risk of cyber related incidents on Community Lifeline sites

- Climate change
- Increases in the number of excessive rainfall events that impact new areas with flood

9.8 MITIGATION STRATEGY

Changes in Priorities

Jericho has experienced moderate population growth; however, it continues to be concerned about the availability of affordable housing and the impact of increase excessive rainfall 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 Jericho adopted the five regional goals defined in Section 6, Mitigation Strategy and did not identify additional jurisdiction-specific objectives.

Status of Previous Actions

The Town of Jericho reviewed its Mitigation Actions described in the 2017 *MHAHMP* and noted the status as documented in Table 9.34.

Table 9.32: Status of Previous Mitigation Actions

Action Date	Action #	Title of project	Hazard(s)	2022 Status Update
2011	2011-1	Upgrade culverts and ditching along roads to mitigate against repeated damages from stormwater or spring snowmelt		Annual ditching and culvert replacement work has continued. In '22 road rebuilds and culvert replacement on Cilley Hill. Culvert replacement liner installed on Griswold Ln.
2011	2011-2	Consider paving certain road sections to lower overall maintenance costs, improve snow plowing speeds and improve overall capability of roads to handle current and projected traffic volumes		Paving schedule has continued to be funded and implemented. Paving in '22 on Griswold, Palmer Ln and apron on Orr Rd.
2011	2011- 3	Undertake erosion or landslide mitigation projects where roads regularly incur damage from adjacent rivers/streams and hillsides		Currently investigating erosion on Brown's River threatening HOA septic and Mills River erosion along VT Rt 117 for mitigation
2017	2017-1	Complete fluvial geomorphology assessment and address identified vulnerable infrastructure		Not addressed and will be moved forward as a 2022 mitigation action.
2017	2017-2	Improve capabilities of existing road and stormwater management infrastructure		This activity continuing and will be forward as a 2022 mitigation action.

2017	2017-3	Implement roads stormwater management plan		This activity continuing and will be forward 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			

Figure 9.10 depicts the locations of previous FEMA Public Assistance Projects in the Town of Jericho, demonstrating recovery and mitigation activities including debris removal, damage to roads and bridges; protective measures; and recreational or other site impacts.

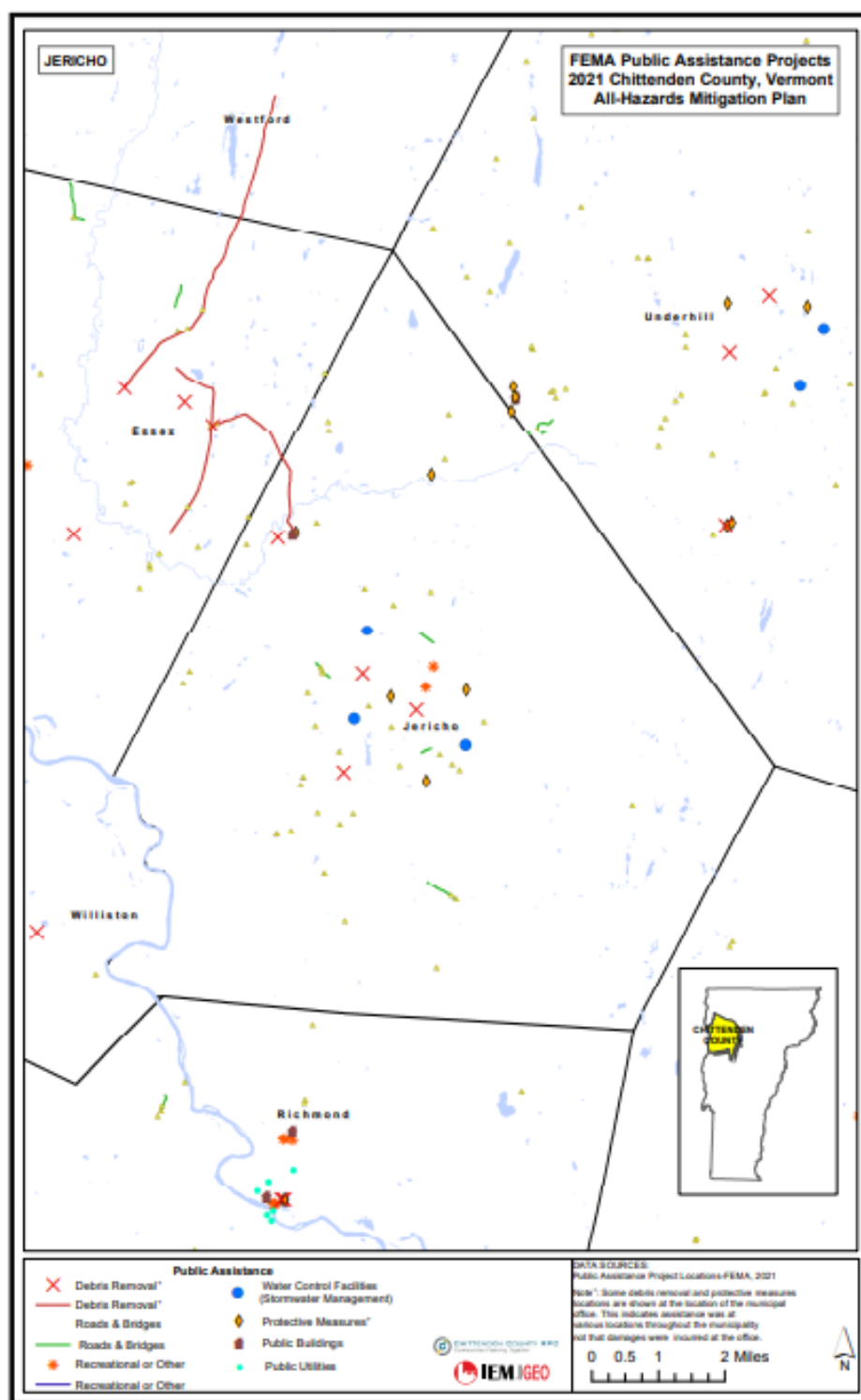


Figure 9.10: Previous FEMA Public Assistance Projects, Town of Jericho¹⁵

¹⁵ Chittenden County Regional Planning Commission, GIS Database; October 14, 2021.

New Mitigation Actions

The Town of Jericho identified seven new actions that were prioritized based on the Mitigation Action Ranking System described in [Section 6, Base Plan](#).

Table 9.33: 2022 Prioritized Mitigation Actions, Town of Jericho

Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-1	Upgrade culverts and ditching along roads to mitigate against repeated damages from stormwater or spring snowmelt	Town Highway Foreman	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	Flood, Fluvial Erosion, Severe Winter Storm Severe Rainstorm	Medium: \$10,000 to \$100,00	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-2	Complete fluvial geomorphology assessments and address identified vulnerable infrastructure	Town Highway Foreman	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary road and bridge closure and budgetary impacts	Flood, Fluvial Erosion, Severe Winter Storm Severe Rainstorm	Medium: \$10,000 to \$100,00	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-3	Improve capabilities of existing road and stormwater management infrastructure	Town Highway Foreman	Addresses damage to new/existing public infrastructure and buildings. Mitigates temporary	Flood, Fluvial Erosion, Severe Winter Storm Severe Rainstorm	Medium: \$10,000 to \$100,00	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium

Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
			road and bridge closure and budgetary impacts					
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-4	Retrofit all new and existing critical facilities	Town Highway Foreman	Addresses damage to new/existing public infrastructure and buildings.	Flood, Fluvial Erosion, Severe Winter Storm Severe Rainstorm	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 New	High
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-5	Retrofit flood-prone structures to include repetitive loss structures	, Town Highway Foreman	Addresses damage to new/existing public and private infrastructure and buildings.	Flood, Fluvial Erosion, Severe Winter Storm Severe Rainstorm	High: \$100,000 or greater	State VANR Grants, HMA, Municipal funds	2022-2027 New	High
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-6	Update existing Flood Insurance Rate Maps (FIRMs) and floodplain maps (RiskMAP program through FEMA)	Town Highway Foreman	Updated information on flood hazards to provide more accurate data on the location of potential flood hazards as a tool to assist in directing future development away from hazard areas.	Flood	Low: Less than \$10,000	State VANR Grants, HMA, Municipal funds	2022-2027 Cont'd	Medium
Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking

Action Number	Proposed Action	Lead Agency/ Department(s)	Risk Reduction Benefit	Hazard(s) Addressed	Estimated Cost	Funding Source	Timeframe	Priority Ranking
2022-7	Develop public-private partnerships to address hazard reduction related needs	Town Select Board	Education and awareness programs to mitigate effects of storms, situational awareness, and fire safety.	All natural and non-natural hazards	Low: Less than \$10,000	Town general funds	2022-2027 New	Medium

Action Plan for Implementation and Integration

The Town of Jericho identified several existing plans or planning processes that can serve to integrate hazard mitigation during the planning cycle. The Town of Jericho 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 2024. 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 village plan.

With regard to a more formal process by which the Town will integrate the requirements of this mitigation plan while developing the Town's annual capital improvement plans/budgets, for periods, the Town will review the recommended Actions detailed below to see if formal incorporation within these annual capital plans is warranted prior to annual review and voting by Town residents. Additionally, CCRPC staff can assist the town with drafting grant applications to fund mitigation projects.

Table 9.34: Action Plan for Implementation and Integration, Town of Jericho

Existing Plan or Procedure	Description of How Mitigation will be Incorporated or Integrated
Integrate goals into local Comprehensive Plan	Continue to coordinate with Planning and Zoning and other applicable departments to incorporate current and emerging risks and actions into planning efforts.
Review/update land development regulations for consistency with mitigation goals	Continue coordination with Planning and Zoning regarding future land use projects.
Review/update building/zoning codes for consistency with mitigation goal	Work with Planning and Zoning regarding county zoning ordinances and consistency with mitigation goals.
Maintain regulatory requirements of floodplain management program (NFIP)	Support Floodplain Manager who is responsible for floodplain management.

Enhance floodplain management through Community Rating System (CRS)	Work with Floodplain Manager and Public Works on reviews of floodplain management and mapping.
Review/Update economic development plan and policies for consistency with mitigation goals	Work with local Economic Development Authority to ensure consistency in plans.
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.
Review/update stormwater plans and procedures for consistency with mitigation goals	Work with Public Works and Road Department to discuss plans and procedures on a more frequent basis.
Maintain ongoing enforcement of existing policies	Support municipal Departments with any applicable enforcement policies.
Monitor funding opportunities	Office of Emergency Management will 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	Municipal Departments will incorporate the concept of 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	Continue work with Planning and Zoning to incorporate mitigation into day-to-day activities.

9.9 ANNEX MAINTENANCE PROCEDURES

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

Table 9.35: Town of Jericho Plan Maintenance Responsibilities for the *Chittenden County, Vermont Multi-Jurisdictional All-Hazards Mitigation Plan, Base Plan*

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 to 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 9.36: Town of Jericho Jurisdiction Annex Maintenance Procedure

Activity	Procedure and schedule	Outcome
Monitoring the Annex	<ol style="list-style-type: none"> 1. Schedule the annual plan review with jurisdiction planning team. 2. Review the status of all mitigation actions, using the <i>Mitigation Action Implementation Worksheet</i> (Section 7, Attachment B, Base Plan). 	Produce an annual report that includes the following: <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> HMPRUC Point of Contact
Updating the Annex	<ol style="list-style-type: none"> 1. Coordinate with the HMPRUC 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.

9.10 ANNEX ADOPTION

The Town of Jericho 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.

9.11 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 20, 2022

TOWN OF Jericho, Vermont Selectboard

A RESOLUTION ADOPTING THE 2022 Chittenden County, Vermont Multi-Jurisdictional Hazard Mitigation Plan

s

WHEREAS, the Town of Jericho 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 Multi-Jurisdictional 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 Jericho 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 Jericho; and

WHEREAS, the Plan recommends several hazard mitigation actions (projects) that will provide mitigation for specific natural hazards that impact the Town of Jericho 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 Jericho eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by Town of Jericho Selectboard.

1. The 2022, Vermont Local Hazard Mitigation Plan is hereby adopted as an official plan of the Town of Jericho;

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 Jericho this 20 day of October 2022.

ATTEST

Town Clerk

Janet Meranda

W. Howe
Selectboard Chair

E. G. G.
Selectboard Member

ATTACHMENT 2: Planning Worksheets and Documentation

Natural Hazard Risk Estimation Matrix										
Jericho	Risk Characteristics	Dam/Levee Failure	Extreme Temperatures	Flooding	Fluvial Erosion	Human Infectious Disease	Invasive Species	Severe Rainstorm	Severe Winter Storm	Wildfire
	0= No developed area impacted									0
Area Impacted	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 impacts									
	4= Over 75% of developed area impacted								4	
Health and Safety	0= No health and safety impact						0			0
	1= Few injuries or illnesses		1	1	1			1	1	
Consequences	2= Few fatalities but many injuries and illnesses									
	3= Numerous fatalities									
	0= No property damage		0				0			
Property Damage	1= Few properties destroyed or damaged									1
	2= Few destroyed or damaged			2	2			2	2	
	3= Few damaged and many destroyed									
	4= Many properties destroyed and damaged									
	0= Little or no environmental damage									
Environmental Damage	1= Resources damage with short-term recovery		1					1		1
	2= Resources damages with long-term recovery						2		2	
	3= Resources destroyed beyond recovery			3	3					
	0= No economic impact									
Economic Damage	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									

Total score		4	9	9		4	6	11	3
	1= Unknown but rare occurrence								
Probability of	2= Unknown but anticipate an occurrence								
Occurrence	3= 100 years or less occurrence								3
	4= 25 years or less occurrence	4	4	4		4			
	5= Once a year or more occurrence						5	5	
Total Risk Rating		16	36	36		16	30	55	9
Low =	Hazard Risk Level 0-18								
Medium =	Hazard Risk Level 19-37								
High =	Hazard Risk Level 38-60								

Technological Hazards											
Jericho	Risk Characteristics	Hazardous Materials Incident	Major Transportation Incident	Multi-Structure Urban Fire	Natural Gas Service Loss	Other Fuel Service Loss	Pollution (algal, etc.)	Power Loss	Sewer Service Loss	Telecommunications Failure	Water Pollution
	0= No developed area impacted								0		
Area	1= Less than 25% of developed area impacted	1	1	1	1	1	1				
Impacted	2= Less than 50% of developed area impacted							2		2	2
	3= Less than 75% of developed area impacts										
	4= Over 75% of developed area impacted										
Health and Safety	0= No health and safety impact								0		
Consequences	1= Few injuries or illnesses	1		1	1	1	1	1		1	1
	2= Few fatalities but many injuries and illnesses		2								
	3= Numerous fatalities										

	0= No property damage				0		0			0		0
Property	1= Few properties destroyed or damaged	1	1	1		1		1	1			
Damage	2= Few destroyed or damaged											
	3= Few damaged and many destroyed											
	4= Many properties destroyed and damaged											
	0= Little or no environmental damage			0	0	0		0		0		0
Environmental	1= Resources damage with short-term recovery	1	1						1			
Damage	2= Resources damages with long-term recovery					2						
	3= Resources destroyed beyond recovery											
	0= No economic impact							0				
Economic	1= Low direct and/or indirect costs	1	1	1	1				1	1		1
Damage	2= High direct and low indirect costs					2	2					
	3= Low direct and high indirect costs											
	4= High direct and high indirect costs											
Total score		5	6	4	3	5	6	4	3	4		4
	1= Unknown but rare occurrence				1	1			1			
Probability of Occurrence	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		15	12	8	3	5	18	20	3	20		16
Low =	Hazard Risk Level 0-18											
Medium =	Hazard Risk Level 19-37											
High =	Hazard Risk Level 38-60											

Societal Hazards							
Jericho	Risk Characteristics	Civil Disturbance	Crime	Economic Recession	Epidemic	Key Employer Loss	Terrorism
	0= No developed area impacted						
Area Impacted	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 impacts			3			
	4= Over 75% of developed area impacted						
Health and Safety	0= No health and safety impact					0	
	1= Few injuries or illnesses	1	1	1			
Consequences	2= Few fatalities but many injuries and illnesses				2		2
	3= Numerous fatalities						
	0= No property damage			0	0	0	
Property Damage	1= Few properties destroyed or damaged	1	1				1
	2= Few destroyed or damaged						
	3= Few damaged and many destroyed						
	4= Many properties destroyed and damaged						
	0= Little or no environmental damage	0	0		0	0	
Environmental Damage	1= Resources damage with short-term recovery			1			1
	2= Resources damages with long-term recovery						
	3= Resources destroyed beyond recovery						
	0= No economic impact						
Economic Damage	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	2	
	4= High direct and high indirect costs						3
Total score		4	4	7	5	3	8
	1= Unknown but rare occurrence						
Probability of	2= Unknown but anticipate an occurrence						

Occurrence	3= 100 years or less occurrence				3		
	4= 25 years or less occurrence			4		4	
	5= Once a year or more occurrence		5				
	Total Risk Rating	0	20	28	15	12	0
Low =	Hazard Risk Level 0-18						
Medium =	Hazard Risk Level 19-37						
High =	Hazard Risk Level 38-60						

Jurisdiction: Jericho **Date:** October 29

Participants: Katherine Sonnick, Town Planner; Adam Magee, Road Crew Foreman

Name: John Abbott **Position/Title:** Administrator **Department/Agency:** Town of Jericho

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	Y 2016	
Capital Improvements Plan	Y 2020	
Economic Development Plan	N	
Impact fees for new development	Y	We collect Road impact fees. No specific requirements that address anything other than stormwater
Local Emergency Operations Plan	Y	Coordinated through the Town, UJFD, Essex & Richmond rescue
Continuity of Operations Plan	Y	See above

Transportation Plan	Y 2015	Developed Bike/Pedestrian addendum
Stormwater Management Plan	Y 2017	
Community Wildfire Protection Plan	N	No pre-emptive trimming or burning, extinguishment only by UJFD
Other special plans (e.g., brownfields redevelopment, disaster recovery, Local Waterfront Redevelopment Plan, climate change adaptation, etc.)	Y 2020	We have installed two solar arrays in the past year in a cooperative program with Encore Renewables & VEC. One was constructed on the capped former town dump and the other in an abandoned gravel pit.
Building Code, Permitting, and Inspection	Yes or No?	Are codes adequately enforced?
Building Code	N	Y
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	
Fire Department ISO rating	N 2013	ISO ratings when last designated were 4, 6 & 10.
Site Plan review requirements	Y	These are required to be provided to DRB to begin permitting approval process.
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	Y	Y
Subdivision ordinance	Y	Y
Floodplain ordinance	Y	Y
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Y	Y
Flood insurance rate maps	Y	Y
Acquisition of land for open space and public recreation uses	Y 2021	We are in the process of conserving the Mobbs Farm in conjunction with the VT Land Trust. The Trails Committee has inventoried all of the easements we hold for access to recreational trails.
Other		
How can these capabilities be expanded and improved to reduce risk?		

Our Town Planner has received a grant to assess storm water management in our 3 town “centers” at Riverside, Jericho Center and Jericho Corner.

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	Town of Jericho	Y	Y	N
B. Engineer/professionals trained in construction practices related to buildings and/or infrastructure	Y	Tyler Billingsley, Consulting Engineer	Y	Y	N
C. Planners/Engineer(s) with an understanding of natural and/or manmade hazards	Y	“	Y	Y	N
D. Floodplain manager	N				
E. Surveyor(s)	Y	Dubois & King, Consultant	Y	Y	N
F. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Aaron Little, Emergency Management Director	Y	Y	Y
G. Personnel skilled in GIS and/or HAZUS	N				
H. Scientist familiar with hazards of the community	N				
I. Emergency manager	Y	See Aaron Little	Y	Y	Y
J. Grant writer(s)	N				
k. Warning systems or services (automated callout, sirens, etc.)	N				
How can these capabilities be expanded and improved to reduce risk?					
We could definitely use a staff grant writer to better support funding and/or position creation. Floodplain manager, climate scientist, GIS mapping and warning system development would also benefit.					

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	Y		
Authority to levy taxes for specific purposes	N		
Fees for water, sewer, gas or electric services	Y		
Impact fees for new development	Y		
Storm water utility fee	N		
Incur debt through general obligation bonds and/or special tax bonds	Y		
Incur debt through private activities	N		
Community Development Block Grant	N		
Other federal funding programs	Y ARPA		
State funding programs	Y		
Public/Private partnership funding sources	Y		
How can these capabilities be expanded and improved to reduce risk?			
I will review these funding sources with our Financial Manager, Brian Stevens to have him provide ideas and resource capacity.			

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?
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Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Y	Affordable Housing Committee, Planning Commission, Conservation Commission, Trails Committee and Transition Town Jericho
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education, household recycling, etc.)	Y	Energy Task Force does education on energy savings and mitigations. We have active Conservation Commission focusing on the sustainability of pollinator plants. Tree warden doing ash borer inventory. UJFD does excellent fire preparedness training in schools.
Natural disaster or safety related school programs	Y	Mostly fire & storm response and preparedness at this point. Hurricane Irene definitely informed emphasis on flooding alerts.
StormReady certification	N	
Firewise Communities certification	N	
Public-private partnership initiatives addressing disaster-related issues	Y	We are working with CCRPC and their consulting group IEM
Other		
How can these capabilities be expanded and improved to reduce risk?		

National Flood Insurance Program (NFIP) Survey Form

Jurisdiction: **Jericho** Floodplain/NFIP Administrator _____

Phone: _____ Date: _____ Email: _____

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	

How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	
Is floodplain management an auxiliary function?	Community FPA	
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	
Compliance History		
Is the community in good standing with NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	
Are there any outstanding compliance issues (i.e., current violations)?		
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		

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	
2. Do environmental policies maintain and restore protective ecosystems?	X	
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? (Not explicitly?)		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?		X
2. Does the building code contain provision to strengthen or elevate construction to withstand hazard forces?		X
3. Do economic development or redevelopment strategies include provisions for mitigation of natural hazards?		X
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	X	

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>

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
<p>If you have questions, contact Dan Albrecht, CCRPC Senior Planner at dalbrecht@ccrpcvt.org or 802-861-0133</p> <p>Or</p> <p>Leroy Thompson, IEM Senior Planner at leroy.thompson@iem.com or 850-570-9867</p>	<p>To view the current mitigation plan for your community please visit the CCRPC website.</p> <p>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.</p>

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	<ul style="list-style-type: none"> • Commonwealth authority: does the Commonwealth have authority to implement the action?

regulations is important in determining how the mitigation action can be best carried out.	<ul style="list-style-type: none"> • 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?

Project Description			Project Benefits								
A	B	C	1	2	3	4	5	7	8	9	
Project #	Mitigation Action	Hazard/ Project Type*	Social (S)	Technical (T)	Administrative (A)	Political (P)	Legal (L)	Economic (E)	Environmental (E)	TOTAL SCORE	Priority
1	Engineering for Stabilizing of Gleason Brook	SIP	1	-	4	0	2	1	2	10	M
2	Stabilizing Gleason Brooks Banks	SIP	1	0	0	0	2	1	1	5	L
3	Road Inventory and Assessment	SIP	0	4	0	0	2	3	3	12	M