

West Rutland, Vermont  
Local Hazard Mitigation Plan



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**Other Key Partners**

Poultney Mettowee Natural Resources Conservation District

Rutland Natural Resources Conservation District

Western Vermont Floodplain Manager



VERMONT DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION  
**WATERSHED  
MANAGEMENT DIVISION**  
RIVERS PROGRAM

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## 1 INTRODUCTION

The impact of expected, but unpredictable natural events can be reduced through community planning and action. The goal of this Plan is to provide a natural hazards local mitigation strategy that makes West Rutland (the Town) more disaster resistant and more resilient after a disaster.

Hazard Mitigation is any sustained policy or action that reduces or eliminates long-term risk to people and property from natural hazards and their effects. FEMA and state agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This Plan recognizes that communities have opportunities to identify mitigation strategies and measures during all the other phases of Emergency Management – Preparedness, Response and Recovery. Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe, and identify local actions and policies that can be implemented to reduce the severity of the hazard.

## 2 PURPOSE

The purpose of this Plan is to assist the Town in identifying all natural hazards facing the community, ranking them according to local vulnerabilities, and developing strategies to reduce risks from those hazards. Once adopted, this Plan is not legally binding; instead, it outlines goals and actions to prevent future loss of life and property.

The benefits of mitigation planning include:

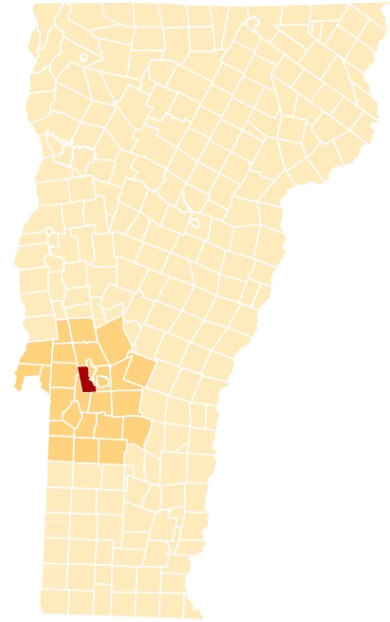
- Identifying actions for risk reduction that are agreed upon by stakeholders and the public.
- Focusing resources on the greatest risks and vulnerabilities.
- Increasing education and awareness of threats and hazards, as well as their risks.
- Communicating priorities to State and Federal officials.
- Aligning risk reduction with other community objectives.

*Furthermore, the Town seeks to be in accordance with the strategies, goals, and objectives of the 2018 State Hazard Mitigation Plan.*

## 3 COMMUNITY PROFILE

### Land Use and Development Patterns

West Rutland is considered a central Vermont location, due to the intersection of major transportation networks. State highways and rail services readily connect West Rutland to bordering states and Canada. The Town is generally accessible within a four hour trip from most major cities in New England, New York state, and Quebec Province.



The Township covers 9,750 acres, mostly being upland woodlands and protected low-land wetlands. Development primarily occurs along two valleys. The first is a north-south valley created by Whipple Hollow Brook. This valley is wide, flat and in some places marshy. The eastern side of Town rises from the valley to an elevation of 900 feet. The second is the east-west valley created by the Castleton River and the east running section of the Clarendon River. The “Castleton Gap” is quite narrow, rising from an elevation of 500 feet in the valley to a northern mountain elevation of 2,111 feet and southern mountain elevation of 1,713 feet. This valley contains the major transportation and communications link between the City of Rutland and New York State. Small farm operations still maintain prime agricultural land in the valley areas.

The Village downtown along Marble Street is a mix of smaller business and residential use. There is an adjacent industrial development area, which is near

full occupancy by larger companies, along Pleasant Street, Thrall and Sheldon Avenues. This borders the marble quarries and processing facilities that were key to the Town's growth in the mid-1800s but are now mostly idle. A third commercial area runs along Business Route 4a to Rutland City, offering a variety of sales and service based companies, including a shopping plaza with a major grocery store.

### Demographics and Growth Potential

The 2018 American Community Survey Five-Year Estimates prepared by the U.S. Census Bureau shows an estimated population of 2,398 for West Rutland, and 1,061 housing units. Of the population included in the survey, 25% were 19 or under, and 19% were 65 or over, with a median age of 43.3 years, comparable to Vermont's median age of 42.

*West Rutland's population has been relatively stable since 2000. Due to COVID-19 some growth in rural areas is anticipated within the foreseeable future, consistent with regional level trends. The local real estate market is strong.*

### Precipitation and Water Features

Precipitation in West Rutland is typical of the rest of the region. Average precipitation is 44 inches of rain; the most rain falls during the 31 days centered around July 23. Average snowfall is 73 inches; the most snow falls during the 31 days centered around February 1.

West Rutland is in a valley of three rivers: Whipple Hollow Brook, Castleton River, and Clarendon River. Together they form the West Rutland Marsh, a 451-acre wetland known for its wildlife habitat.

### Drinking Water and Sanitary Sewer

Nearly all the households in West Rutland (85%) are served by a municipal water system. Water is drawn from two wells located near the Sabotka Recreation Area at the end of Fairview Avenue in the Clarendon River floodplain. These wells pump the water for the entire system. There are also two water storage tanks: one serving the southside of town and another for the northeast section of town.

The current sewerage system serves 900 households within West Rutland. There is one main pumping station on Elm Street as well as six smaller collection stations. The collection system feeds a sequential batch reactor system adjacent to the Clarendon River. The design capacity is 450,000 gallons per day.

The remaining 17% of housing units have on-site septic.

In 2016, the Town expanded its water and sewer service along the Business Route 4 corridor. This 1.2 mile well-traveled corridor has needed municipal services for decades. This extension provides both domestic drinking water and fire protection to approximately 30 landowners, including sewer services to the Rutland Town Fire District

### Transportation

West Rutland has ±9.5 miles of state highways and ±30 miles of town highways. The major highways running through West Rutland are US Route 4 and 4A running east and west, and Route 133 traveling north-south through the southern half of town.

In 2020, VTrans reconfigured the Route 4 intersection by removing the jug handle and upgrading the signals. Bike paths were also included on the Class 1 Main Street portion.

In addition, there are several other roads that have been identified as locally important for use as through-ways, detours, short-cuts, and access to critical facilities such as the fire station, town garage, town office, and school. These routes are shown in orange in **Figure 1**.

According to the Town's Road Erosion Inventory, approximately 92% of the Town's road mileage is hydrologically connected – meaning it is within 100-feet of a water resource (i.e., perennial/intermittent stream, wetland, lake, or pond). Proximity to water resources can make these sections of road more vulnerable to flooding and fluvial erosion.

West Rutland has a total of 20 bridges in its highway network with a span of 20 feet or more and ±480 culverts. Five of the 20 bridges are town-owned.

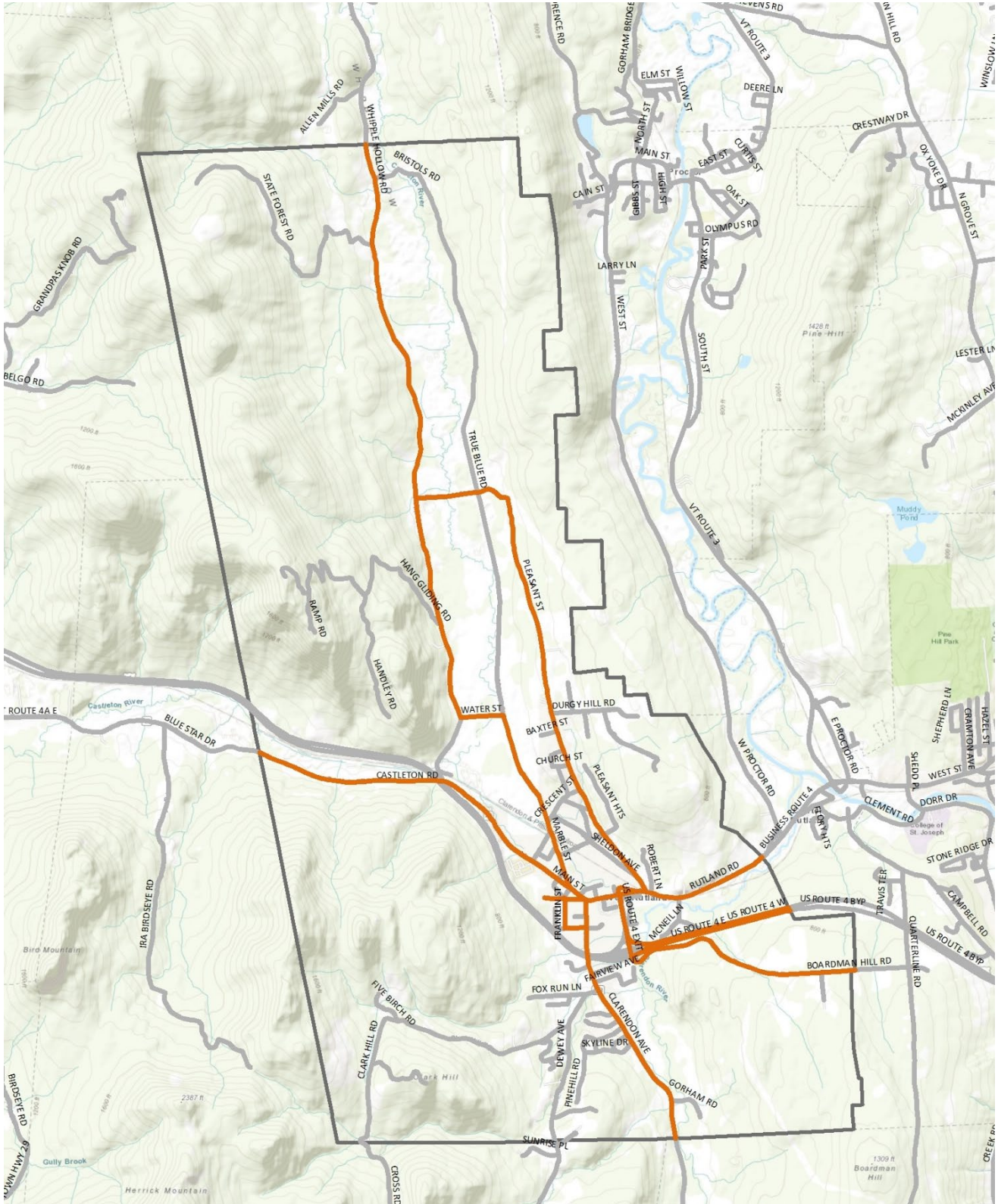


Figure 1: Locally Important Routes for Through-Ways, Detours, Short-Cuts, and Access to Critical Facilities  
Shown in orange on Figure 1

There is an east-west section of rail through West Rutland carrying both freight and passenger trains, with a spur to the north. The junction of these lines is close to the downtown area. There are several crossings including across VT Route 4A.

### Electric Utility Distribution System

Electric service to approximately 1,300 customers is provided by Green Mountain Power via a single circuit. Average annual outage statistics between 2015 and 2019 are summarized in **Table 1**.

Table 1: Power Outage Summary

<b>Average Annual (2015-2019)</b>	
Avg # of times a customer was without power	0.81
Avg length of an outage in hours	1.68
# of hours the typical customer was without power	1.36
<b>2019 only</b>	
Avg # of times a customer was without power	0.49
Avg length of an outage in hours	1.75
# of hours the typical customer was without power	0.86

The longest power outage affecting the greatest number of customers between 2015 and 2019 was 5.14 hours long and impacted 122 customers. During this same time period, there was a 65.35 hour long outage, but it only impacted 1 customer.

### Public Safety

West Rutland has one fire station on Marble Street that houses the West Rutland Fire Department. The Fire Department provides primary emergency response to fire, rescue, and hazardous materials incidents within the Town. The department is staffed by approximately 20 firefighters who participate in ongoing training on a regular basis. Emergency response equipment includes three engines, one ladder truck, and two utility trucks. Specialty equipment includes a utility all-terrain vehicle, a cache of vehicle rescue equipment, and modern firefighting equipment.

The Fire Department is an active member of the Rutland County Fire Mutual Aid Association, which coordinates response and training efforts.

Law enforcement in West Rutland is provided by the Rutland County Sheriff's Department on a full-time basis. Additional assistance is provided by the Vermont State Police as needed.

The nearest hospital is the Rutland Regional Medical Center. Ambulance service is provided by Regional Ambulance Service.

### Emergency Management

The Town Manager is the Emergency Management Director (EMD) who works with others in town to keep the Local Emergency Plan up-to-date as well as to coordinate with nearby towns and regional emergency planning efforts.

## 4 PLANNING PROCESS

### Plan Developers

Steffanie Bourque, an Emergency Management Planner at the Rutland Regional Planning Commission (RRPC) assisted the Town with updating its Local Hazard Mitigation Plan. Hazard Mitigation Grant Program funds from FEMA supported this process.

The Hazard Mitigation Planning Team members who assisted with the update include the Town Manager/EMD, Zoning Administrator, Road Foreman, Water/Sewer Operator, and Fire Chief.

### Plan Development Process

The 2021 West Rutland Local Hazard Mitigation Plan is the first single jurisdiction mitigation plan drafted for the Town. Previously, the Town had a town-specific Annex in the 2009 Rutland County, VT Hazard Mitigation Plan.

This Plan has been reconstructed as a single jurisdiction, stand-alone Local Hazard Mitigation Plan that will be submitted for individual approval to FEMA. As such, several sections have been added or updated to include all necessary information. A summary of the plan development process is provided in **Table 2**.

## Table 2: Plan Development Process

**January 27, 2020:** Hazard Mitigation Planning Team kick-off meeting. Discussed what a LHMP is; the benefits of hazard mitigation planning; current plan status; the planning process; outreach strategy; and plan sections. Planning Team members and the plan purpose were confirmed. Planning Team meetings were not open to the public.

**January 28 & 30, 2020:** Public notice posted on RRPC, Town, and Fire Department social media that the Town is engaged in hazard mitigation planning and updating their LHMP. No public comments received. Emailed notice to officials in neighboring towns of Rutland Town, Clarendon, Ira, Castleton, Pittsford, and Proctor. Name and contact information provided in notices for more information. No comments were received from neighboring towns.

**February 27, 2020:** Planning Team meeting – completed work on the community profile and community hazard risk assessment. Began work on storm history and identifying vulnerable assets for highest risk hazards.

*Work was suspended from March through July 2020 due to the COVID-19 pandemic.*

**August 24, 2020:** Planning Team meeting – continued work on hazard identification and risk assessment.

**September 11, 2020:** Completion of the hazard identification and risk assessment – a critical milestone in the plan update process. Finalized working draft to share at public meeting on September 14, 2020.

**September 14, 2020:** Working draft LHMP shared with Vermont Hazard Mitigation Officer, Poultney Mettowee Natural Resource Conservation District, and Rutland Natural Resource Conservation District for review and comment. Comments received from the Poultney Mettowee NRCD and incorporated into the Plan.

**September 14, 2020:** Working draft LHMP presented at joint public meeting of the Selectboard and Planning Commission to encourage input from local government and the public that could affect the plan's conclusions and better integrate with Town initiatives. Members of the public attended this meeting. Copy of working draft and notice of public comment period with instructions to email comments to the RRPC posted on RRPC and Town websites. Notice also posted at the Town Office and Post Office. Comments on the draft plan were accepted until September 28, 2020. No comments were received during the meeting or public comment period.

**October 5, 2020:** Planning Team meeting – confirmed no changes to the hazard identification and risk assessment following the public comment period. Began work on hazard mitigation strategy – confirmed mitigation goals and identified community capabilities; reviewed the methodology for evaluating a range of mitigation actions.

**October 26, 2020:** Planning Team meeting – continued work on the hazard mitigation strategy – evaluated and prioritized actions.

**November 30, 2020:** Planning Team completed work on the mitigation strategy; plan maintenance; and changes since the 2009 annex. Draft LHMP finalized for presentation to local officials and the public at the December 14, 2020 Selectboard meeting.

**Early December 2020:** Public notice of the plan development status and December 14, 2020 public meeting posted on RRPC and Town websites, Facebook, etc.

**December 14, 2020:** Final draft LHMP emailed to local officials in neighboring towns and Rutland and Poultney Mettowee Natural Resources Conservation Districts for review and comment. No comments were received. Final draft LHMP presented at joint public meeting of the West Rutland Selectboard and Planning Commission for review and comment. A member of the public was present at this meeting. Public notice included instructions to email comments on the draft plan to the RRPC. Comments on the draft plan were accepted until December 28, 2020. No comments were received during the meeting or comment period.

**December 30, 2020:** Final draft LHMP submitted to VEM for Approval Pending Adoption.



In addition to the local knowledge of Planning Team members and other relevant parties, several existing plans, studies, reports, and technical information were utilized in the preparation of this Plan. A summary of these is provided in **Table 3**.

**Table 3: Existing Plans, Studies, Reports & Technical Information**

2020 Local Emergency Management Plan
2020 FEMA NFIP Insurance Reports
2019-2015 Green Mountain Power Outage Data
2019 Transportation Resiliency Planning Tool
2018 State of Vermont Hazard Mitigation Plan
2018 West Rutland Road Erosion Inventory Report
2018 Castleton River Headwaters Stormwater Master Plan
2018 American Community Survey Five-Year Estimate
2016 West Rutland Town Plan
2012 Stormwater Infrastructure Mapping Study
2012 Flood Hazard Area Regulations
2009 Rutland Region All Hazards Mitigation Plan
2008 Zoning Regulations
RRPC Local Liaison Reports of Storm Damages
National Oceanic and Atmospheric (NOAA) National Climatic Data Center's Storm Events Database
FEMA Disaster Declarations for Vermont
OpenFEMA Dataset: Public Assistance Funded Project Summaries for Vermont
U.S. Geological Survey National Water Information System- Stream Gage Data
Rutland Herald Archives
FEMA Flood Insurance Rate Maps

## Changes Since the 2009 Annex

As described in the Community Profile section of this Plan, the Town's population has held relatively steady since 2000. The local real estate market is currently strong, so population growth is possible.

West Rutland's 2016 Town Plan is intended to guide growth and development in addition to protecting the public health, safety, and welfare of its residents. Several of the Town Plan objectives support the development of detailed planning and regulatory land use controls and the protection of special areas and natural resources from encroaching development.

According to the West Rutland Zoning Administrator, zoning permits issued over the last decade document development activity for the following:

**Commercial Projects:** New major commercial investments peaked between 2010 to 2013 (immediately following the end of the Great Recession), totaling 14 projects over the decade. In addition, expansion of existing businesses and new Home Occupations added 53 projects.

**Residential Projects:** Eighteen (18) new Single Family Homes were constructed during this period. However, there has also been a notable trend to convert existing multi-family structures back to single family use; and some older housing stock was demolished. Additions to existing living area involved 64 permits, perhaps reflecting a trend to stay-in-place. The net result to existing housing stock has been a loss of two dwelling units; and an estimated overall net increase (new construction less change of use/demo) of 16 housing units over the period.

**Subdivision Projects:** Twenty-one (21) minor subdivision permits were issued, resulting in a gain of 24 new parcels.

**Miscellaneous Construction:** This category includes accessory structures (mostly detached sheds and garages), farm buildings, fences, fill and excavation, swim pools, etc. There were 181 projects approved during this period.

In summary, the Town has had relatively small but steady growth over the past decade, averaging 35 permits (all categories) issued annually. It appears that there was average commercial and residential vacancy during this same period.

*Development in West Rutland since 2009 has not made the community more vulnerable to natural hazards.*

The Town's mitigation priorities shifted a bit. In 2009, the West Rutland Annex in the Rutland County, VT Hazard Mitigation Plan addressed all-hazards (natural, manmade, and technological). Floods, traffic accidents, and hazardous material spills posed the greatest risks to West Rutland.

The 2021 Local Hazard Mitigation Plan update focused exclusively on natural hazards. Flooding (inundation, flash, and fluvial erosion) remained one of the community's highest risk natural hazards. Flood-related landslides, high winds, and severe winter storms also joined the list.

In 2020, the Town did not formally assess the risk associated with invasive species; however, they did discuss the potential hazards and risks associated with the Emerald Ash Borer (EAB) given the confirmed detection in West Rutland in October 2020. Invasive species were not included in the 2009 Annex.

West Rutland has made significant progress completing the mitigation projects identified in the 2009 Annex – see **Appendix C**. A key accomplishment was installation of a generator at the municipal well house. In addition, the Town has stabilized a section of bank along the Clarendon River to protect the municipal well house from fluvial erosion. A green stormwater management practice was also constructed at the West Rutland School. The infiltration practice collects stormwater from the parking lot and driveway, reducing the runoff onto Main Street.

*Actions taken by West Rutland since 2009 and following Tropical Storm Irene have made the community more prepared and less vulnerable to future natural hazard impacts.*

Nonetheless, due to an increase in the frequency and intensity of weather events, the Town remains vulnerable to flooding, fluvial erosion, high winds, severe winter storms, as well as invasive species (particularly the Emerald Ash Borer).

As a result, the Town has identified two new mitigation actions to address severe winter storm and high wind impacts; one new action to address invasive species, one new action to address all natural hazards that could result in a power outage; and several actions to address remaining flood hazards – see **Table 6**.

## 5 HAZARD IDENTIFICATION AND RISK ASSESSMENT

After engaging in discussions, the Town identified the following “highest risk hazards” that they believe their community is most vulnerable to:

### Local Vulnerabilities and Risk Assessment

One of the most significant changes from the 2009 Annex is the way hazards are assessed. To be consistent with the approach to hazard assessment in the 2018 State Hazard Mitigation Plan, the Hazard Mitigation Planning Team conducted an initial analysis of known natural hazard events<sup>1</sup> to determine their probability of occurring in the future.

The Planning Team then ranked the hazard impacts associated with the known natural hazards based on the probability of occurrence and potential impact to life, the economy, infrastructure, and the environment. The ranking results are presented in **Table 4**.

- *Thunderstorms with associated flash flooding, fluvial erosion, inundation flooding, high wind, and/or hail, and landslides due to slope saturation.*
- *Winter Storms with associated extreme cold, snow, ice, and high winds.*

Each of these “highest risk hazards” (**orange** in **Table 4**) are further discussed in this section and depicted in the Local Natural Hazards and Vulnerabilities Map in **Appendix B**.

The “lower risk hazards” that are considered to have a low probability of occurrence and low potential impact are not discussed. For information on these hazards, consult the State Hazard Mitigation Plan.

Table 4: Community Hazard Risk Assessment

Hazard Event	Hazard Impacts	Probability	Potential Impact					Score
			Life	Economy	Infrastructure	Environment	Average	
<b>Thunderstorm</b>	<b>Flash Flooding/ Fluvial Erosion</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1.75</b>	<b>7</b>
<b>Ice Jam</b>								
Tropical Storm/Hurricane								
Tornado	<b>Inundation Flooding</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1.75</b>	<b>7</b>
<b>Landslide</b>	<b>Wind/Hail</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1.75</b>	<b>7</b>
	<b>Landslide</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1.5</b>	<b>3</b>
<b>Winter Storm</b>	<b>Cold/Snow /Ice/Wind</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>8</b>
Drought	Heat	1	2	1	1	1	1.25	1.25
	Drought	1	1	1	1	2	1.25	1.25
Wildfire	Wildfire	1	1	1	1	1	1	1
Earthquake	Earthquake	1	1	1	1	1	1	1

\*Score = Probability x Average Potential Impact

	Frequency of Occurrence: Probability of a plausibly significant event	Potential Impact: Severity and extent of damage and disruption to population, property, environment, and the economy
<b>1</b>	<b>Unlikely:</b> <1% probability of occurrence per year	<b>Negligible:</b> isolated occurrences of minor property and environmental damage, potential for minor injuries, no to minimal economic disruption
<b>2</b>	<b>Occasionally:</b> 1–10% probability of occurrence per year, or at least one chance in next 100 years	<b>Minor:</b> isolated occurrences of moderate to severe property and environmental damage, potential for injuries, minor economic disruption
<b>3</b>	<b>Likely:</b> >10% but <75% probability per year, at least 1 chance in next 10 years	<b>Moderate:</b> severe property and environmental damage on a community scale, injuries or fatalities, short-term economic impact
<b>4</b>	<b>Highly Likely:</b> >75% probability in a year	<b>Major:</b> severe property and environmental damage on a community or regional scale, - multiple injuries or fatalities, significant economic impact

<sup>1</sup> This Plan defines natural hazards as atmospheric, hydrologic, geologic, and wildfire phenomena. Hazards not necessarily related to the physical environment, such as infectious disease, were excluded from consideration by the Planning Team.

## Invasive Species

The Planning Team did not formally assess the risk associated with invasive species; however, they did discuss the potential hazards and risks associated with the Emerald Ash Borer (EAB) specifically.

Vermont's EAB infestation was first detected in 2018 in northern Orange County. In October 2020, a new detection of EAB in West Rutland was confirmed. This is the first confirmed detection in Rutland County. An inventory of trees within the road right-of-way is needed to determine how many Ash trees are at risk. The potential risk to private woodlots and impacts on the local economy have not been quantified.

West Rutland will collaborate with the Vermont Urban & Community Forestry Program to complete a Rural Road Resilient Right-of-Ways Vegetation Assessment to aid in the management of roadside Ash trees.

Inundation flooding of land adjoining the normal course of a stream or river is a natural occurrence. If these floodplain areas were left in their natural state, floods likely would not cause significant damage.

While inundation-related flood loss is a significant component of flood disasters, the more common mode of damage in Vermont is associated with fluvial erosion, often associated with physical adjustment of stream channel dimensions and location during flood events. These dynamic and oftentimes catastrophic adjustments are due to bed and bank erosion, debris and ice jams, or structural failure of or flow diversion by human-made structures. An ice jam occurs when the ice layer on top of a river breaks into large chunks which float downstream and cause obstructions (State HMP 2018). The Town has a moderate probability of ice jams on the Castleton River with flooding impacts on Water Street and on the Clarendon River with flooding impacts near the well house at the Recreation Area on Fairview Avenue.

## Highest Risk Hazard Profiles

### **Inundation/Flash Flooding/Fluvial Erosion**

Floods can damage or destroy public and private property; disable utilities; destroy or make impassable roads and bridges; destroy crops and agricultural lands; cause disruption to emergency services; and result in fatalities. People may be stranded in their homes for a time without power, heat, or communication or they may be unable to reach their homes. Long-term collateral dangers include the outbreak of disease, loss of livestock, broken sewer lines or wash out of septic systems causing water supply pollution, downed power lines, loss of fuel storage tanks, fires, and release of hazardous materials.

As noted in the State Hazard Mitigation Plan, "Flooding is the most common recurring hazard event in Vermont" (2018: 55). There are two types of flooding that impact communities in Vermont: inundation and flash flooding. Inundation is when water rises onto low lying land. Flash flooding is a sudden, violent flood which often entails fluvial erosion (stream bank erosion).

Several major flooding events have affected the state in recent years, resulting in multiple Presidential Disaster Declarations. From 2003 to 2010, Rutland County experienced roughly \$1.4 million in property damages.

The worst flooding event in recent years came in August of 2011 from Tropical Storm Irene (DR4022), which dropped up to 10-11 inches of rain in some areas of Rutland County. Irene caused 2 deaths and \$55,000,000 in reported property damages and \$2.5 million in crop damages in Rutland County. Although the storm was technically a tropical storm, the effects of the storms are profiled in this flooding section, since the storm brought only large rainfall and flooding to the Town, not the high winds typically associated with tropical storms. This caused most streams and rivers to flood in addition to severe fluvial erosion.

From 2012 to 2019, Rutland County experienced approximately \$3.5 million in property damages; with \$1.9 million due to a flash flood event in July 2017 (DR4330) and \$1 million due to a flash flood event in April 2019 (DR4445).

*In West Rutland, flooding is a risk. Damages from Tropical Storm Irene were significant and resulted in approximately \$180,500 in impacts. In West Rutland, damage due to flooding usually consists of impacts to roads and culverts.*



Inundation Flooding on Main Street by the Westway Mall

As shown on the Local Natural Hazards and Vulnerabilities Map in **Appendix B**, West Rutland has sizeable floodplain areas (locally known as the West Rutland Marsh). The floodplains surround the Castleton and Clarendon Rivers and literally bisect the center of town, extending outward in all directions.

The Castleton River flows from the north into West Rutland and then westward out of the municipality and into the Poultney River. The Clarendon River flows into West Rutland from the south and then eastward into the Otter Creek.

The town center, which includes the town hall, school, and other retail and professional services, is located south of the West Rutland Marsh.

**59 structures are in the Special Flood Hazard Area (6% of community structures); including single and multi-family dwellings, gas stations, and other commercial properties. According to FEMA, 30% of these properties have flood insurance. In total, these 20 policies cover \$3,196,700 in value. There are no repetitive loss properties.**

Areas vulnerable to inundation flooding include: Main Street, including the Westway Mall; Elm Street; Proctor Street, Clearwater Boulevard (municipal wastewater treatment plant access road); Thrall Avenue (through the Marsh); Recreation Fields and Bike/Ped Path; Water Street (annual flooding due to undersized bridge over the Castleton River); Gorham Road; and Bristols Road.

The Castleton River has undergone Stream Geomorphic Assessment (SGA) and a Stormwater Master Plan was developed in 2018 for the headwaters in Castleton, Ira, West Rutland, and Pittsford. The Plan's goal was to evaluate approximately 30,000 acres in the Castleton River watershed to identify sources of increased stormwater runoff and associated sediments and nutrients. The work involved identifying sources of stormwater, prioritizing sources based on various criteria, and designing mitigation projects - several projects were identified in West Rutland.

Both municipal utilities (drinking water wells and wastewater treatment plant) lie within the Clarendon River Special Flood Hazard Area. Although both wells are in the floodplain, they have not been impacted by inundation flooding in past events. However, fluvial erosion adjacent to the wells required streambank stabilization, which was completed in 2020.

*As weather patterns shift and we see larger storms and more frequent freeze-thaw cycles, the Town will monitor for signs that rivers that have historically been stable becoming less stable, with increased erosion, widening, trees falling in from its banks, etc.*

Similarly, the wastewater treatment plant itself has not been impacted by inundation flooding in past events. However, during Tropical Storm Irene, a significant deposition event obstructed the discharge pipe for the wastewater treatment plant. Debris surrounding the outfall was removed, the pipe repaired, and the area armored to protect it from future events. Also, during Irene the access road to the plant (Clearwater Blvd) was flooded, which isolated the plant. In addition, the systems main pump station on Elm Street is vulnerable to flooding. This station has been flood-proofed.

In addition to inundation flooding, areas of town outside of designated floodplains can be impacted by flash flooding – Marble Street, Crescent Street, Pleasant Street, Slason Street.



Flash Flooding on Marble Street

The mountainous areas of town are especially vulnerable to flash flooding and in some cases landslides due to slope saturation from intense rainfall/snowmelt (Dewey Avenue – April 2019).



Dewey Avenue Cracking Due to Slope Failure



Dewey Avenue Slope Failure Restoration

In 2018, the Town completed an inventory of hydrologically-connected roads for the Municipal Roads General Permit. This inventory identified areas vulnerable to flash flooding and recommended corrective actions to make these areas more resilient.

### High Wind/Hail

Severe thunderstorms can produce high winds, lightning, flooding, rains, large hail, and even tornadoes. Thunderstorm winds are generally short in duration, involving straight-line winds and/or gusts more than 50 mph. Thunderstorm winds can cause power outages, transportation and economic disruptions, significant property damage, and pose a high risk of injuries and loss of life.

From 2004 to 2010, for thunderstorms that caused more than \$200,000 in damage, Rutland County experienced nearly \$2 million in property damage.

From 2011 to 2019, thunderstorms resulted in just under \$2.2 million in property damage in Rutland County, with \$525,000 due to a high wind event in May 2017.

Hail is a form of precipitation composed of spherical lumps of ice. Known as hailstones, these ice balls typically range from ¼ - 2” diameter on average, with much larger hailstones forming in severe thunderstorms. The size of hailstones is a direct function of the severity and size of the thunderstorm that produces it.

Much of the hail activity in Rutland County is scattered and varies in intensity, and the resulting damage usually takes form in uprooted trees, downed power lines, and crop damage.

*Violent windstorms are possible here; West Rutland is susceptible to high directional winds, particularly on Boardman Hill, Clark Hill, Whipple Hollow, and Pleasant Street. Many storms with high winds result in downed trees, damaged phone and power lines, buildings, and other property.*

West Rutland is vulnerable to power outages. To mitigate for this, the following public buildings/critical facilities have been equipped with back-up power:

- Wastewater Treatment Plant and pump stations on Elm St, Clarendon Ave, and Harrison Ave. The department has a tag along generator for the other smaller pump stations.
- Well House
- Fire Station (which also serves as the primary local emergency operations center)

The public buildings without back-up power are the Town Hall/Office (the alternate local emergency operations center and alternate local shelter), West Rutland School (the primary local shelter), and Town Garage. If a power outage coincided with a large scale sheltering event, the Town could be faced with a serious situation.

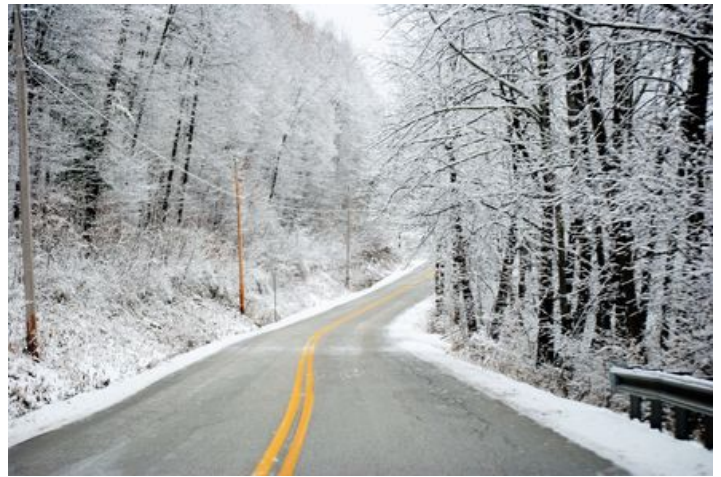
### **Extreme Cold/Snow/Ice/Wind**

In the Rutland Region, most winter weather events occur between the months of December and March. Throughout the season, winter weather events can include snowstorms, mixed precipitation events of sleet and freezing rain, blizzards, glaze, extreme cold, the occasional ice storm, or a combination of any of the above. Events can also be associated with high winds or flooding, increasing the potential hazard.

The costs of these storms come in the form of power outages due to heavy snow or ice accumulations, damaged trees, school closings and traffic accidents.

From 2002 to 2010, Rutland County experienced \$1.1 million in property and crop damages from winter storms. From 2011 to 2019, Rutland County experienced \$1.5 million in property damage, with \$300,000 due to a 10” to 20” heavy, wet snowfall across the county on December 9, 2014.

There have been four winter storm-related federally declared Disasters in the county (the ice storm of January 1998 – DR 1201; severe winter storms in December 2000 and 2014 – DR 1358 and DR 4207, respectively; and severe storm and flooding in April 2007 – DR 1698).



*Typically, towns’ vulnerability to snow and ice storms are power outages and loss of road accessibility. As previously described, the Town has taken some measures to mitigate its vulnerability to power outages caused by ice/wet snow accumulation on power lines or trees falling on power lines; however, the Town remains vulnerable especially if the outage coincided with a large scale sheltering event.*

In general, snow accumulation has not made the Town vulnerable to loss of road accessibility. The Town’s fleet of snowplows has ensured that roads are accessible, even in major snow accumulation events. Areas prone to drifting are known (Boardman Hill, Old Town Farm, Whipple Hollow) and maintained accordingly.

The drinking water and wastewater utilities are not particularly vulnerable to severe winter storms except for the potential for freezing water service lines, which can result in breaks.

## Highest Risk Hazard History

Note: These are the most up to date significant events impacting West Rutland. Federal declarations are depicted in **bold**.

### Inundation/Flash Flooding/Fluvial Erosion

**4/15/2019: DR4445 1-2” rain with significant snow melt: \$26,325 local damage, including landslide on Dewey Ave**

**7/1/2017: DR4330 3-4” rain the previous 3-4 days with flash flooding on 7/1/17: no reported damage**

**6/25-7/11/2013: DR4140 with heavy rain over multiple days: no reported impact**

**8/28/2011: DR4022 Tropical Storm Irene with ±5” rain: \$180,576 local damage (\$106,273 Individual / \$19,177 Public / \$55,126 NFIP)**

1/18/2006: 1.5-2.5” rain: \$50,000 regional damage

**12/16/2000: DR1358 2-4” rain: \$8,970 local damage**

**9/16/1999: DR1307 Tropical Storm Floyd with 4-5” rain: no reported impact**

**1/19/1996: DR1101 snow melt/rain: \$15,446 local damage**

### High Wind/Hail

2/29/2019: 48 mph winds: \$25,000 regional damage

4/1/2018: 63 mph winds: \$50,000 regional damage

10/30/2017: 40 mph winds: \$100,000 regional damage

5/5/2017: 64 mph winds: \$500,000 regional damage

7/3/2014: 55 mph wind and 1.5” hail: no reported damage

6/23/2013: 55 mph winds: \$20,000 local damage

7/13/2011: Quarter-size hail: no reported damage

5/26/2010: 55 mph winds: \$25,000 local damage

9/29/2005: 35 mph winds: \$50,000 regional damage

10/6/2001: high winds: \$50,000 regional damage

7/9/2001: 50 mph winds: \$5,000 local damage

### Extreme Cold/Snow/Ice/Wind

3/14/2017: 18” snow: \$25,000 regional damage

2/1/2015: Record cold month with 15 to 20+ days below zero: no reported impact

1/7/2015: 0 to 10 degrees with winds of 15-30 mph creating wind chills colder than -20 to -30 below zero: no reported impact

**12/9/2014: DR4207 with 10-20” snow: \$100,000 regional damage**

3/12/2014: 24” snow and wind gusts to 35-40 mph: \$35,000 regional damage

12/26/2012: 18” snow: \$20,000 regional damage

2/23/2010: 6-30” snow: \$100,000 regional damage

12/11/2008: 5” snow, sleet, and freezing rain resulting in glaze coating of ice: \$50,000 regional damage

**4/15-16/2007: DR1698 “Nor’icane” with 3” snow, rain with winds of 60-80 mph: \$1,000,000 regional damage**

10/25/2005: 8-18” snow: \$100,000 regional damage

4/4/2003: 18” snow: \$40,000 regional damage

**3/5/2001: EM3167 20-30” snow: no reported damage**

## Vulnerability Summary

### Inundation/Flash Flooding/Fluvial Erosion

**Location<sup>1</sup>:** Main Street by the Westway Mall, Westway Mall, Proctor Street, and Elm Street (in the Clarendon River floodplain), Clearwater Boulevard (access road to the municipal wastewater treatment plant), Thrall Avenue (runs through the Marsh), Recreation Fields and Bike/Ped Path (located south of the Clarendon River floodplain), Water Street (annual flooding due to undersized bridge on Castleton River), Gorham Road (crosses the Clarendon River), Bristols Road (crosses the Castleton River), Marble Street (runs along the Castleton River floodplain), Crescent Street, Pleasant Street, Slason Road, and Dewey Avenue

**Vulnerable Assets<sup>1</sup>:** Roads, culverts, bridges, municipal wells, municipal wastewater treatment plan access road, municipal wastewater pump station on Elm Street, buildings on Proctor Street

**Extent:** ±5” rain; extent data for fluvial erosion is unavailable

**Impact:** \$180,576 local damage

**Probability:** >75% chance per year

### High Wind/Hail

**Location<sup>1</sup>:** Town-wide; particularly Boardman Hill, Clark Hill, Whipple Hollow, and Pleasant Street

**Vulnerable Assets<sup>1</sup>:** Phone and power lines; buildings; other property; trees

**Extent:** 1.5” hail and ±65 mph winds

**Impact:** \$25,000 local / \$500,000 regional damage

**Probability:** >75% chance per year

### Extreme Cold/Snow/Ice/Wind

**Location<sup>1</sup>:** Town-wide; Drifting on Boardman Hill, Old Town Farm, and Whipple Hollow

**Vulnerable Assets<sup>1</sup>:** Roads, culverts, bridges, trees, power and phone lines

**Extent:** Up to 30” of snow, glaze coating of ice, 80 mph winds, 15 to 20+ days below zero

**Impact:** \$1,000,000 regional damage

**Probability:** >75% chance per year

<sup>1</sup> See **Appendix B:** Local Natural Hazards and Vulnerabilities Map



## 6 HAZARD MITIGATION STRATEGY

The highest risk natural hazards and vulnerabilities identified in the previous section of this Plan directly inform the hazard mitigation strategy outlined below, which the community will strive to accomplish over the coming years. The mitigation strategy chosen by the Town includes the most appropriate activities to lessen vulnerabilities from potential hazards.

### Mitigation Goals

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The Hazard Mitigation Planning Team discussed mitigation goals and identified the following as the community's main mitigation goals:

- Reduce or avoid long-term vulnerabilities to identified hazards.
- Reduce the loss of life and injury resulting from these hazards.
- Mitigate financial losses incurred by municipal, residential, industrial, agricultural, and commercial establishments due to disasters.
- Reduce the damage to public infrastructure resulting from these hazards.
- Encourage hazard mitigation planning as a part of the municipal planning process.
- Encourage the adoption and implementation of existing mitigation resources, such as River Corridor Plans and Fluvial Erosion Hazard Maps, if available.
- Recognize the connections between land use, stormwater, road design, maintenance, and the effects from disasters.
- Ensure that mitigation measures are sympathetic to the natural features of community rivers, streams, and other surface waters; historic resources; character of neighborhoods; and the capacity of the community to implement them.

### Community Capabilities

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Each community has a unique set of capabilities, including authorities, programs, staff, funding, and other resources available to accomplish mitigation and reduce long-term vulnerability. West Rutland's mitigation capabilities that reduce hazard impacts or that could be used to implement hazard mitigation activities are listed below.

### Administrative and Technical

In addition to the Emergency Management staff described in Section 3, municipal staff that can be used for mitigation planning and to implement specific mitigation actions include: Town Manager (also serves as the Emergency Management Director), Highway Foreman, Water/Wastewater Operator, and Zoning Administrator.

In addition to paid staff, there is a 5-member Selectboard, 5-member Planning Commission, 5-member Development Review Board, Recreation Director, and Tree Warden.

To augment local resources, the Town has formal mutual aid agreements for emergency response – fire and public works. Technical support is available through the RRPC in the areas of land use planning, emergency management, transportation, GIS mapping, and grant writing. Technical support is also available through the State ANR for floodplain administration and VTrans Districts for hydraulic analyses.

**Strengths:** Past success in securing grants for public infrastructure improvements ● coordination between departments is effective ● strong working relationships with neighboring communities ● excellent record keeping systems ● highly experienced and trained staff ● established maintenance program for cleaning stormwater collection catch basins

**Areas for Improvement:** Public works staff could benefit from training in online mapping and asset management resources – ANR Atlas, VTCulverts, MRGP REI Portal ● few staff perform multiple functions – lack of redundancy makes Town's administrative and technical capabilities vulnerable ● periodic tabletop and field exercises to test and strengthen operational coordination more ● maintenance program for cleaning culverts and ditches

## Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Examples of planning capabilities that can either enable or inhibit mitigation include land use plans, capital improvement programs, transportation plans, stormwater management plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans. Examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed, and structures are built.

**Strengths:** Existing land use ordinances are effective at reducing hazard impacts and they are adequately administered and enforced ● codes and standards are adequately administered and enforced ● elements of hazard mitigation are included in other local plans ● completed stormwater master planning

**Areas for Improvement:** Capital planning ● continuity of operations planning

**Zoning Regulations:** Adopted June 31, 2008

**Description:** Provide for orderly community growth.

**Relationship to Natural Hazard Mitigation Planning:** Establish site plan review requirements and zoning districts (including Ridgeline and Flood Hazard Area Overlays) with specific standards. Requirements designed to prevent overdevelopment; mitigate negative impacts to the natural/human environment; and minimize effects to the historical/aesthetic character of the community.

**Flood Hazard Area (FHA) Regulations:** Adopted June 11, 2012

**Description:** Apply to all areas in the Town identified as areas of special flood hazard.

**Relationship to Natural Hazard Mitigation Planning:** Ensures the design and construction of development in flood and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood loss or damage to life and property.

**Road and Bridge Standards:** Adopted on July 23, 2019

**Description:** Provide minimum codes and standards for the construction, repair, and maintenance of all town roads and bridges.

**Relationship to Natural Hazard Mitigation Planning:** Include management practices and are designed to ensure the safety of the traveling public, minimize damage to road infrastructure during flood events, and enhance water quality protections.

**Fire Department ISO Rating:** Issued in September 2017

**Description:** The West Rutland Fire Department's ISO rating is 05/5X. This rating is a score from 1 to 10 that indicates how well-protected the community is by the local fire department.

**Relationship to Natural Hazard Mitigation Planning:** Everyone wants to keep family, home, and business safe from fires. The ISO rating is a measure of the effectiveness of a community's fire services.

**Municipal Plan:** Adopted March 28, 2016

**Description:** A framework for defining and attaining community aspirations through public investments, land use regulations, and other implementation programs.

**Relationship to Natural Hazard Mitigation Planning:** Includes specific goals and policies related to mitigating natural hazards.

**Local Emergency Management Plan:** Last adopted on April 13, 2020

**Description:** Establishes lines of responsibility and procedures to be implemented during a disaster and identifies high risk populations, hazard sites, and available resources.

**Relationship to Natural Hazard Mitigation Planning:** Includes actions for tracking events and response actions including damage reports to facilitate funding requests during recovery. This can be essential to preparing hazard mitigation project applications for FEMA funding.

**Road Erosion Inventory Report:** December 2018

**Description:** Prioritizes those infrastructure projects necessary to improve transportation network resiliency and water quality.

**Relationship to Natural Hazard Mitigation Planning:** Improvements are designed to minimize or eliminate flood impacts on hydrologically-connected road segments regulated under the Municipal Roads General Permit.

**Castleton River Headwaters Stormwater Master Plan:** January 31, 2018

**Description:** Identify current stormwater inputs and develop prioritized projects to mitigate stormwater water quality problems.

**Relationship to Natural Hazard Mitigation Planning:** Many projects accomplish multiple goals—water quality and mitigation.

## Financial

Financial capabilities are the resources that a community has access to or is eligible to use to fund mitigation actions.

West Rutland's current annual budget is approximately \$1,660,850, with \$671,130 to fund the Highway Department. In addition to property tax revenues, the Town collects fees for water and sewer services. Although the Town has not done so in the past, it is eligible to incur debt through general obligation bonds to fund mitigation actions.

**Strengths:** Maximize grant opportunities ● dedicated reserve funds (highway, bridge, water, and sewer) that can be used to fund mitigation actions ● water/sewer fees are sufficient for funding current operations and funding future improvements

**Areas for Improvement:** Tax revenues are sufficient for highway department daily operations to maintain the status quo, but insufficient to handle contingencies and/or improvements

## Education and Outreach

West Rutland has several education and outreach opportunities that could be used to implement mitigation activities and communicate hazard-related information:

- Social media groups on Facebook
- Municipal website
- Bone Builders
- Senior Lunches
- West Rutland Families and Town Special Events Committee

**Strengths:** Strong social media presence ● multiple programs/organizations are already in place in the community

**Areas for Improvement:** Better coordination is needed to help implement future mitigation actions

## National Flood Insurance Program Compliance

The Town joined the National Flood Insurance Program (NFIP) in 1989. The Zoning Administrator enforces NFIP compliance through permit review requirements in its Zoning and Flood Hazard Area regulations. West Rutland's regulations outline detailed minimum standards for development in flood hazard areas defined as FEMA Special Flood Hazard Areas and Floodway Areas.

The Town discussed the following as possible actions to continue NFIP compliance:

- 1) Provide information to residents on safe building initiatives and the availability of flood insurance.
- 2) Update river corridor protection language in the flood hazard regulations bylaw.
- 3) Work with the RRPC to ensure that floodplain and river corridor maps are kept up to date.

## State Incentives for Flood Mitigation

Vermont's Emergency Relief Assistance Funding (ERAF) provides state funding to match FEMA Public Assistance after federally-declared disasters. Eligible public costs are generally reimbursed by FEMA at 75% with the State matching 7.5%. The State will increase its match to 12.5% or 17.5% of the total cost if communities take steps to reduce flood risk as described below.

12.5% funding for eligible communities that have adopted four (4) mitigation measures:

- 1) NFIP participation
- 2) Town Road and Bridge Standards
- 3) Local Emergency Management Plan (LEMP)
- 4) Local Hazard Mitigation Plan (LHMP)

17.5% funding for eligible communities that also participate in FEMA's Community Rating System OR adopt Fluvial Erosion Hazard or other river corridor protection bylaw that meets or exceeds the Vermont ANR model regulations.

*West Rutland's current ERAF rate is 7.5% because they 1) participate in the NFIP; 2) have adopted Town Road and Bridge Standards; and 3) have a current LEMP. West Rutland's 2012 Flood Hazard Area regulations achieved "interim" ERAF credit. Their ERAF rate will increase to 17.5% with adoption of a FEMA-approved LHMP.*

## Mitigation Action Identification

The Hazard Mitigation Planning Team discussed the mitigation strategy, reviewed projects from the 2009 Annex, and identified possible new actions from the following categories for each of the highest risk natural hazards identified in Section 5:

- 1) **Local Plans and Regulations:** These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.
- 2) **Structure and Infrastructure Projects:** These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This applies to public or private structures as well as critical facilities and infrastructure. Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance Program.
- 3) **Natural Systems Protection:** These are actions that minimize damage and losses and preserve or restore the functions of natural systems.
- 4) **Education and Awareness Programs:** These are actions to inform and educate the public about hazards and potential ways to mitigate them. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk is more likely to lead to community support for direct actions.

### Local Plans and Regulations

**Integrate Mitigation into Capital Improvement Programs:** Hazard mitigation can be included in capital improvement programs by incorporating risk assessment and hazard mitigation principles into the capital planning efforts.

### Manage Development in Erosion Hazard Areas:

The intent of River Corridor Bylaws is to 1) allow for wise use of property within river corridors that minimizes potential damage to existing structures and development from flood-related erosion, 2) discourage encroachments in undeveloped river corridors and 3) reasonably promote and encourage infill and redevelopment of designated centers that are within river corridors.

**Improve Stormwater Management Planning:** Rainwater and snowmelt can cause flooding and erosion in developed areas. A community-wide stormwater management plan can address stormwater runoff.

**Reduce Impacts to Roadways:** The leading cause of death and injuries during winter storms is from automobile or other transportation accidents, so it is important to plan for and maintain adequate road and debris clearing capabilities.

### Structure and Infrastructure Projects

**Remove Existing Structures from Flood Hazard Areas:** FEMA policy encourages and may provide funding for the removal of structures from flood-prone areas to minimize future flood losses and preserve lands subject to repetitive flooding.

**Improve Stormwater Drainage Capacity:** Improving the stormwater drainage capacity can help to minimize inundation flooding and fluvial erosion by: 1) increasing drainage/absorption capacities with green stormwater management practices; 2) increasing dimensions of undersized drainage culverts in flood-prone areas; 3) stabilizing outfalls with riprap and other slope stabilization techniques; and 4) re-establishing roadside ditches.

**Conduct Regular Maintenance for Drainage Systems:** Regular maintenance will help drainage systems and flood control structures continue to function properly. Techniques include: 1) routinely cleaning and repairing stormwater infrastructure – culverts, catch basins, and drain lines; 2) routinely cleaning debris from support bracing underneath low-lying bridges; and 3) inspecting bridges and identifying if any repairs or retrofits are needed to maintain integrity or prevent scour.

**Protect Infrastructure and Critical Facilities:** Mitigation techniques can be implemented to help minimize losses to infrastructure and protect critical facilities from flood events by: 1) elevating roads above the base flood elevation to maintain dry access; 2) armoring the banks of streams near roadways to prevent washouts or 3) rerouting a stream away from a vulnerable roadway; and 4) floodproofing critical facilities.

**Protect Power Lines:** Power lines can be protected from the impacts of natural hazards by: 1) incorporating inspection and maintenance of hazardous trees within the road right-of-way into the drainage system maintenance process and 2) burying power lines.

**Retrofit Critical Facilities:** Critical facilities can be protected from the impacts of high winds and winter storms. Techniques include: 1) retrofitting critical facilities to strengthen structural frames to withstand wind and snow loads; 2) anchoring roof-mounted mechanical equipment; and 3) installing back-up generators or quick connect wiring for a portable generator.

### **Natural Systems Protection**

**Protect and Restore Natural Flood Mitigation Features:** Natural conditions often provide floodplain protection, riparian buffers, groundwater infiltration, and other ecosystem services that mitigate flooding. It is important to preserve such functionality. Possible projects include: 1) establishing vegetative buffers in riparian areas; 2) stabilizing stream banks; 3) removing berms; 4) minimizing impervious area development; and 5) restore incision areas.

### **Education and Awareness Programs**

**Educate Property Owners About Freezing Pipes:** Extreme cold may cause water pipes to freeze and burst, which can cause flooding inside a building. Education and Awareness Programs for property owners may include: 1) educating building owners on how to protect their pipes, including locating water pipes on the inside of building insulation or keeping them out of attics, crawl spaces, and vulnerable outside walls and 2) informing homeowners that keeping water within the pipes moving by letting a faucet drip during extreme cold weather may prevent freezing and the buildup of excessive pressure in the pipeline, avoiding bursting.

**Assist Vulnerable Populations:** Measures could be taken to ensure vulnerable populations are adequately protected from the impacts of natural hazards, such as: 1) organizing outreach and 2) establishing and promoting accessible heating or cooling centers in the community.

### **Mitigation Action Evaluation and Prioritization**

For each mitigation action identified, the Hazard Mitigation Planning Team evaluated its potential benefits and/or likelihood of successful implementation. Each action was evaluated against a broad range of criteria, including a planning level assessment of whether the costs are reasonable compared to the probable benefits. Results of this evaluation are presented in **Table 5**.

### **Mitigation Action Implementation**

After careful evaluation and prioritization, the Planning Team agreed upon a list of actions that are acceptable and practical for the community to implement.

*Those actions without overall public support/political will were not selected for implementation. Those actions whose costs were not reasonable compared to the probable benefits were also not selected.*

For the selected actions, the Planning Team then 1) assigned a responsible party to lead the implementation of each action; 2) identified potential funding mechanisms; and 3) developed a timeframe for implementing each action. This action plan is presented in **Table 6**.

**Note that the Town will make every effort to maximize use of future Public Assistance Section 406 Mitigation opportunities when available during federally declared disasters.**

Table 5: Mitigation Action Evaluation and Prioritization

Mitigation Action	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	Est Cost	C/B
<b>Local Plans and Regulations</b>									
Integrate Mitigation into Capital Improvement Programs	1	1	1	1	1	1	6	1	Yes
Plan for and Maintain Adequate Road and Debris Clearing Capabilities	1	1	1	1	1	1	6	1	Yes
Update Road Erosion and Culvert Inventories	1	1	1	1	1	1	6	1	Yes
Review VTrans Bridge Inspection Reports <sup>1</sup> and Plan for Identified Repairs to Prevent Scour	1	1	1	1	1	1	6	1	Yes
Manage Development in Erosion Hazard Areas with River Corridor Bylaws	1	1	1	0	1	1	5	1	Yes
Improve Stormwater Management Planning by Completing a Stormwater Management Plan	0	1	1	1	0	1	4	1	Yes
A Stormwater Master Plan for the Castleton River Headwaters was completed in 2018 by the Poultney Mettowee Natural Resources Conservation District, so the Planning Team did not recommend this action for implementation.									
<b>Structure and Infrastructure Projects</b>									
Stabilize Outfalls	1	1	1	1	1	1	6	1	Yes
Install/Re-establish Roadside Ditches	1	1	1	1	1	1	6	1	Yes
Protect Power Lines and Roadway by Inspecting and Removing Hazardous Trees in Road ROW	1	1	1	1	1	1	6	1	Yes
Increase Drainage/Absorption Capacities with Green Stormwater Management Practices	1	1	1	1	1	1	6	1-2	Yes
Installation of a green stormwater management practice at the West Rutland School was completed in 2018. This infiltration practice collects stormwater from the parking lot and driveway, reducing the runoff onto Main Street. Additional opportunities exist, so the Planning Team recommended this action for implementation.									
Install Back-up Generators or Quick Connect Wiring at Critical Facilities	1	1	1	1	1	1	6	2	Yes
Routinely Clean and Repair Stormwater Infrastructure	1	1	0	1	1	1	5	1	Yes
Routinely Clear Debris from Support Bracing Underneath Low-Lying Bridges	1	1	0	1	1	1	5	1	Yes
Elevate Roads Above Base Flood Elevation to Maintain Dry Access	1	1	1	0	1	1	5	3	Yes
Increase Dimension of Drainage Culverts in Flood-Prone Areas	1	1	1	1	1	1	6	1	Yes
There currently are no known undersized culverts, so the Planning Team did not recommend this action for implementation.									
Floodproof Critical Facilities	1	1	1	0	1	1	5	2	Yes
The Elm Street wastewater pump station is the only critical facility vulnerable to flooding. This station has been floodproofed, so the Planning Team did not recommend this action for implementation.									
Bury Power Lines	1	1	1	0	-1	1	3	3	No
Remove Existing Structures from Flood-Prone Areas	1	1	1	0	-1	1	3	3	No
Retrofit Critical Facilities to Strengthen Structural Frames to Withstand Wind and Snow Loads	No existing critical facilities that require structural retrofits, so the Planning Team did not evaluate this action.								
Anchor Roof-Mounted Mechanical Equipment on Critical Facilities	No existing critical facilities with roof-mounted mechanical equipment, so the Planning Team did not evaluate this action.								

<sup>1</sup> VTrans inspects all town-owned bridges in the State's Town Highway Bridge Program every two years. Bridge inspection reports are available on the VTrans website.

Mitigation Action	Life Safety	Prop Protect	Tech	Political	Admin	Other Obj	Benefit Score	Est Cost	C/B
<b>Natural Systems Protection</b>									
Stabilize Stream Banks	The Planning Team did not evaluate these actions because there are no known areas; however, the Town will collaborate with the Rutland and Poultney Mettowee Natural Resources Conservation Districts to identify and implement natural systems protection projects that meet the goals of this Plan.								
Establish Vegetative Buffers in Riparian Areas									
Remove Berms									
Restore Incision Areas									
<b>Education and Awareness Programs</b>									
Keep the Ditches Clean Campaign	1	1	1	1	1	1	6	1	Yes
Educate Property Owners about Emerald Ash Borer	1	1	1	1	1	1	6	1	Yes
Educate Property Owners about Freezing Pipes	The Town has a “Drip Program” in place to educate property owners about freezing pipes.								
Assist Vulnerable Populations	West Rutland already has a system in place to assist vulnerable populations – see 2020 Local Emergency Management Plan.								

**Table 5 Evaluation Criteria:**

- Life Safety** – How effective will the action be at protecting lives and preventing injuries?
- Property Protection** – How effective will the action be at eliminating or reducing damage to structures and infrastructure?
- Technical** – Is the mitigation action a long-term, technically feasible solution?
- Political** – Is there overall public support/political will for the action?
- Administrative** – Does the community have the administrative capacity to implement the action?
- Other Community Objectives** – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation?

**Rank each of the above criteria in Table 5 with a -1, 0, or 1 using the following table:**

- 1= Highly effective or feasible
- 0 = Neutral
- 1 = Ineffective or not feasible

**Estimated Cost** – 1 = less than \$50,000; 2 = \$50,000 to \$100,000; 3 = more than \$100,000

**C/B** – Are the costs reasonable compared to the probable benefits? Yes or No

**Table 6 Community Lifelines Description:** A Community Lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. The primary objective of lifelines is to ensure the delivery of critical services that alleviate immediate threats to life and property when communities are impacted by disasters. These critical services are organized into one of seven lifelines:








 <p><b>Safety and Security</b></p> <ol style="list-style-type: none"> <li>1. Law Enforcement</li> <li>2. Fire Service</li> <li>3. Search &amp; Rescue</li> <li>4. Government Service</li> <li>5. Community Safety</li> </ol>	 <p><b>Food, Water, Shelter</b></p> <ol style="list-style-type: none"> <li>1. Food</li> <li>2. Water</li> <li>3. Shelter</li> <li>4. Agriculture</li> </ol>	 <p><b>Health and Medical</b></p> <ol style="list-style-type: none"> <li>1. Medical Care</li> <li>2. Public Health</li> <li>3. Patient Movement</li> <li>4. Medical Supply Chain</li> <li>5. Fatality Management</li> </ol>	 <p><b>Energy (Power &amp; Fuel)</b></p> <ol style="list-style-type: none"> <li>1. Power Grid</li> <li>2. Fuel</li> </ol>	 <p><b>Communications</b></p> <ol style="list-style-type: none"> <li>1. Infrastructure</li> <li>2. Responder Communications</li> <li>3. Alerts, Warnings, &amp; Messages</li> <li>4. Finance</li> <li>5. 911 &amp; Dispatch</li> </ol>	 <p><b>Transportation</b></p> <ol style="list-style-type: none"> <li>1. Highway/Road/Motor Vehicle</li> <li>2. Mass Transit</li> <li>3. Railway</li> <li>4. Aviation</li> <li>5. Maritime</li> </ol>	 <p><b>Hazardous Materials</b></p> <ol style="list-style-type: none"> <li>1. Facilities HAZMAT, Pollutants, Contaminants</li> </ol>
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Table 6: Mitigation Action Implementation

**Plan for and Maintain Adequate Road and Debris Clearing Capabilities:** Includes capital planning and funding to support the appropriate number of staff and equipment needed to maintain the transportation network in West Rutland.

**ADDRESSED HAZARDS**

**Winter Storm**  
Primary Hazard



**High Winds**

**Lead Party**

Selectboard

**Type of Project**

Local Plans and Regulations

**COMMUNITY LIFELINES TARGETED**

**Safety & Security**



**Transportation**  
Primary Lifeline

**Area of Impact**

Town-wide; ±30 mile road network

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Road Commissioner

**BENEFIT SCORE = 6**

**PROJECT TIMELINE**

To coincide with preparing the annual Town budget each fall

**Update Road Erosion and Culvert Inventories:** These inventories were completed in 2017 and serve as the basis for asset management and should be kept up-to-date annually, with a full re-assessment every 5 years.

**ADDRESSED HAZARDS**

**Flooding**

**Lead Party**

Road Commissioner

**Type of Project**

Local Plans and Regulations

**COMMUNITY LIFELINES TARGETED**

**Safety & Security**



**Transportation**  
Primary Lifeline

**Area of Impact**

Town-wide; ±28 miles of hydrologically-connected roads and ±480 culverts

**FUNDING SOURCES**

- Local funding
- VTrans Better Roads

**PARTNERSHIPS**

- Regional Planning Commission

**BENEFIT SCORE = 6**

**PROJECT TIMELINE**

Re-assessment summer 2022

**Plan for Bridge Repairs:** Every two years, VTrans inspects all town-owned bridges that are in the State's Town Highway Bridge Program. These inspection reports will be reviewed and used to plan for any identified flood-related bridge repairs.

**ADDRESSED HAZARDS**

**Flooding**

**Lead Party**

Road Commissioner

**Type of Project**

Local Plans and Regulations

**COMMUNITY LIFELINES TARGETED**

**Safety & Security**



**Transportation**  
Primary Lifeline

**Area of Impact**

Five (5) town-owned bridges: B13, B14, B15, B16, and B26

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Selectboard
- VTrans

**BENEFIT SCORE = 6**

**PROJECT TIMELINE**

Review Reports in Nov 2020  
Develop Plan for Repairs, if needed, by Jun 2021



**Manage Development in Erosion Hazard Areas with River Corridor Bylaws:** River Corridor Bylaws can be used in conjunction with Flood Hazard Area Regulations to manage development in areas prone to flood impacts. West Rutland will explore the feasibility of bringing their current regulations up to current State standards.

**ADDRESSED HAZARDS****Flooding****Lead Party**

Planning Commission

**Type of Project**

Local Plans and Regulations

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**

Primary Lifeline

**Area of Impact**

Town-wide

**FUNDING SOURCES**

- Local funding
- Municipal Planning Grant

**PARTNERSHIPS**

- Selectboard
- Regional Planning Commission

**BENEFIT SCORE = 5****PROJECT TIMELINE**

Determine extent of updates needed in Jan 2021  
Gauge the public support/political will by Jul 2021  
Submit recommendations to Selectboard by Dec 2021

**Stabilize Culvert Outfalls:** Erosion at the outlet of culverts is common and can cause structural failure with serious downstream consequences. Properly stabilized outfalls protect channel bank stability and reduce erosion. West Rutland has identified the following locations where culvert outlet stabilization is needed.

**ADDRESSED HAZARDS****Flooding****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**

Primary Lifeline

**Area of Impact**

- 1) O2030 – rill erosion
- 2) O2041 – rill erosion
- 3) O2099 – rill erosion
- 4) O2867 – rill erosion

**FUNDING SOURCES**

- Local funding
- VTrans Better Roads
- Grants-In-Aid
- FEMA HMGP

**PARTNERSHIPS**

- Selectboard
- ANR Stream Engineer
- US Army Corps of Engineers

**BENEFIT SCORE = 6****PROJECT TIMELINE**

See MRGP

**Re-work Roadside Ditches:** Properly installed and stabilized roadside ditches are critical to protect the integrity of the road. Although West Rutland has an extensive network of ditches, the areas noted below have ditches that need to be re-worked to bring them up to current municipal Road Standards.

**ADDRESSED HAZARDS****Flooding****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**

Primary Lifeline

**Area of Impact**

- 1) Boardman Hill
- 2) Clark Hill

**FUNDING SOURCES**

- Local funding
- VTrans Better Roads
- Grants-In-Aid

**PARTNERSHIPS**

- Selectboard

**BENEFIT SCORE = 6****PROJECT TIMELINE**

- 1) 2021 construction season
- 2) 2022 construction season

**Remove Hazardous Trees in Road Right-of-Way (ROW):** Hazardous trees in the road ROW can contribute to power and communication outages as well as debris in the roadway during winter storms and high wind events. West Rutland will remove hazardous trees within their road ROW as they are identified and/or request removal by Green Mountain Power if also within the power line ROW. Work will be done in accordance with the Rural Road Resilient ROW Vegetation Assessment, when completed.

**ADDRESSED HAZARDS****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Area of Impact**

Town-wide

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Tree Warden
- Green Mountain Power
- Selectboard

**BENEFIT SCORE = 6****PROJECT TIMELINE**

As needed; See Rural Road Resilient ROW Vegetation Assessment

**Install Green Stormwater Management Practices:** Green infrastructure uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage stormwater runoff and control flooding. The 2018 Stormwater Master Plan for the Castleton River Headwaters includes site restoration plans for several locations. West Rutland will continue work with the Poultney Mettowee NRCDC to pursue implementation of these projects.

**ADDRESSED HAZARDS****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Area of Impact**

- Crescent St and Highland Ave
- Swale between Route 4 and Westway Mall
- Jiffy Mart and Bailey Motors

**FUNDING SOURCES**

- Local funding
- Design/Implementation Block Grant

**PARTNERSHIPS**

- Selectboard
- Poultney Mettowee NRCDC
- Westway Mall

**BENEFIT SCORE = 6****PROJECT TIMELINE**

Develop a schedule for funding and construction in Dec 2021

**Install Back-up Power at Critical Facilities:** Generators are emergency equipment that provide a secondary source of power to a facility. West Rutland has identified two critical facilities in need of back-up power.

**ADDRESSED HAZARDS****Lead Party**Selectboard – Town Office  
Schoolboard – Elementary School**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Area of Impact**

- Town Office (alternate local EOC and alternate shelter)
- Elementary School (primary shelter)

**FUNDING SOURCES**

- Local funding
- FEMA HMGP

**PARTNERSHIPS**

- None

**BENEFIT SCORE = 6****PROJECT TIMELINE**

- 2022 construction season
- 2024 construction season

**Routinely Clean and Repair Stormwater Infrastructure:** Regular maintenance is one of the most effective ways to mitigate the impacts of flooding. Routine cleaning and repairs of ditches, culverts, catch basins, and the West Rutland Channel (runs adjacent to Main and Marble Streets from Gilmore Street past Barnes Street) will be done according to the Highway Department’s maintenance schedule and the Municipal Roads General Permit (MRGP).

**ADDRESSED HAZARDS****Flooding****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**  
Primary Lifeline**Area of Impact**

Town-wide; ±30 mile road network and ±480 culverts; State culverts with significant occlusion near Route 4, Exit 6 discharge to the Channel via Elm and Proctor Streets

**FUNDING SOURCES**

- Local funding
- VTrans Better Roads
- Grants-In-Aid

**PARTNERSHIPS**

- Selectboard
- VTrans
- US Army Corps of Engineers

**BENEFIT SCORE = 5****PROJECT TIMELINE**

Channel Assessment summer 2022  
See Highway Department’s Maintenance Schedule and MRGP

**Routinely Clear Debris from Low-Lying Bridge Support Bracing:** Regular maintenance will help structures continue to function properly and not create a hazard during a flood event. West Rutland has identified one (1) low-lying bridge.

**ADDRESSED HAZARDS****Flooding****Lead Party**

Road Commissioner

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**  
Primary Lifeline**Area of Impact**

Bridge (B13) on Water Street

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Selectboard
- ANR Stream Engineer
- US Army Corps of Engineers

**BENEFIT SCORE = 5****PROJECT TIMELINE**

As needed

**Elevate Roads Above Base Flood Elevation to Maintain Dry Access:** Clearwater Boulevard, the access road to the municipal wastewater treatment plant, was inundated by flood waters during Tropical Storm Irene. West Rutland will investigate alternatives to ensure the plant is accessible during future flood events.

**ADDRESSED HAZARDS****Flooding****Lead Party**

Selectboard

**Type of Project**

Infrastructure

**COMMUNITY LIFELINES TARGETED****Safety & Security****Transportation**  
Primary Lifeline**Food, Water, Shelter****Area of Impact**

Clearwater Boulevard

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Road Commissioner

**BENEFIT SCORE = 5****PROJECT TIMELINE**

Jan 2021 – Dec 2021

**Educate Property Owners about Emerald Ash Borer and Keep the Ditches Clean Campaign:** West Rutland will undertake education and awareness efforts on 1) the Emerald Ash Borer and the impacts of infestation and 2) the importance of keeping the municipal ditches free of yard waste and other debris.

**ADDRESSED HAZARDS**



**Flooding**



**Invasive Species**

**Lead Party**

Selectboard

**Type of Project**

Education and Awareness

**COMMUNITY LIFELINES TARGETED**



**Safety & Security**



**Transportation**

Primary Lifeline

**Area of Impact**

Town-wide

**FUNDING SOURCES**

- Local funding

**PARTNERSHIPS**

- Tree Warden

**BENEFIT SCORE = 6**

**PROJECT TIMELINE**

Spring 2021 – Emerald Ash Borer educational outreach  
Fall 2021 – Keep the Ditches Clean educational outreach

## Process for Incorporating Plan Requirements into Other Planning Mechanisms

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For West Rutland to succeed in reducing long-term risks, the information and recommendations of this Plan should be integrated throughout government operations.

The following are specific examples of how the Town will incorporate this Plan into other plans, programs, and procedures:

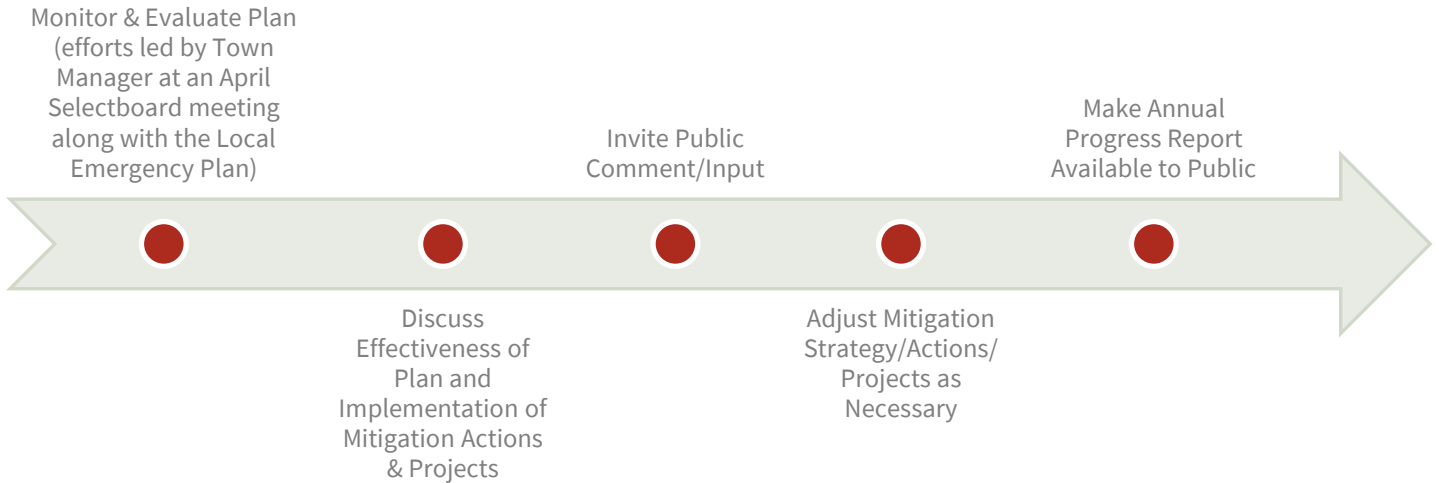
- The Selectboard will work with the Town Manager and Public Works Department heads to incorporate risk assessment and hazard mitigation goals into capital planning efforts and improvement programs.
- The Planning Commission will integrate the hazard mitigation goals for disaster resiliency into the goals and objectives of the next updates to the Town Plan and Zoning and Flood Hazard Area Regulations.
- The Road Commissioner will implement several mitigation infrastructure projects (e.g., upsize perennial and drainage culverts in flood-prone areas, re-work roadside ditches) through existing plans (2018 Road Erosion Inventory Report).
- The Selectboard will work with the Poultney Mettowee and Rutland Natural Resources Conservation Districts to identify opportunities to collaborate on natural systems protection projects along the Castleton and Clarendon Rivers and their tributaries.
- The 2018 Stormwater Master Plan for the Castleton River Headwaters identified several potential sites for green stormwater infrastructure installations, which could have an impact on water quality and flood risk reduction. The Selectboard will work with the Poultney Mettowee Natural Resources Conservation District to develop a schedule for funding and completing the recommended projects.

## 7 PLAN MAINTENANCE

This Plan is dynamic. To ensure the Plan remains current and relevant, it is important it be monitored, evaluated, and updated periodically.

### Monitoring and Evaluation

This Plan will be monitored and evaluated annually starting in 2022 in accordance with the following process:



The status (e.g., in progress, complete) of each mitigation action should be recorded in **Table 7**. If the status is “in progress” note whether the action is on schedule. If not, describe any problems, delays, or adverse conditions that will impair the ability to complete the action.

### Updating

This Plan will be updated at a minimum every five (5) years in accordance with the following process:



Table 7: Mitigation Action Status

Mitigation Action	2022	2023	2024	2025	2026
<b>Local Plans and Regulations</b>					
Plan for and Maintain Adequate Road and Debris Clearing Capabilities					
Update Road Erosion and Culvert Inventories					
Plan for Bridge Repairs					
Manage Development in Erosion Hazard Areas with River Corridor Bylaws					
<b>Structure and Infrastructure Projects</b>					
Stabilize Culvert Outfalls					
Re-work Roadside Ditches					
Remove Hazardous Trees in Road ROW					
Install Green Stormwater Management Practices					
Install Back-up Power at Critical Facilities					
Routinely Clean and Repair Stormwater Infrastructure					
Routinely Clear Debris from Low-Lying Bridge Support Bracing					
Elevate Roads Above Base Flood Elevation to Maintain Dry Access					
<b>Education and Awareness Programs</b>					
Emerald Ash Borer Educational Outreach					
Keep the Ditches Clean Campaign					

**CERTIFICATE OF ADOPTION**  
**TOWN OF WEST RUTLAND, Vermont Selectboard**  
**A RESOLUTION ADOPTING THE West Rutland, Vermont 2021 Local Hazard Mitigation Plan**

WHEREAS, the Town of West Rutland has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of the hazards profiled in the **2021 West Rutland, Vermont Local 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 West Rutland has developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for its **2021 West Rutland, Vermont Local 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 West Rutland; and

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

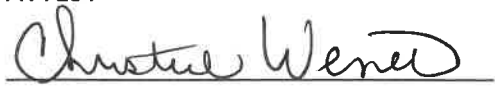
RESOLVED by Town of West Rutland Selectboard:

1. The **2021 West Rutland, Vermont Local Hazard Mitigation Plan** is hereby adopted as an official plan of the Town of West Rutland;
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 West Rutland this 8<sup>th</sup> day of February 2021.

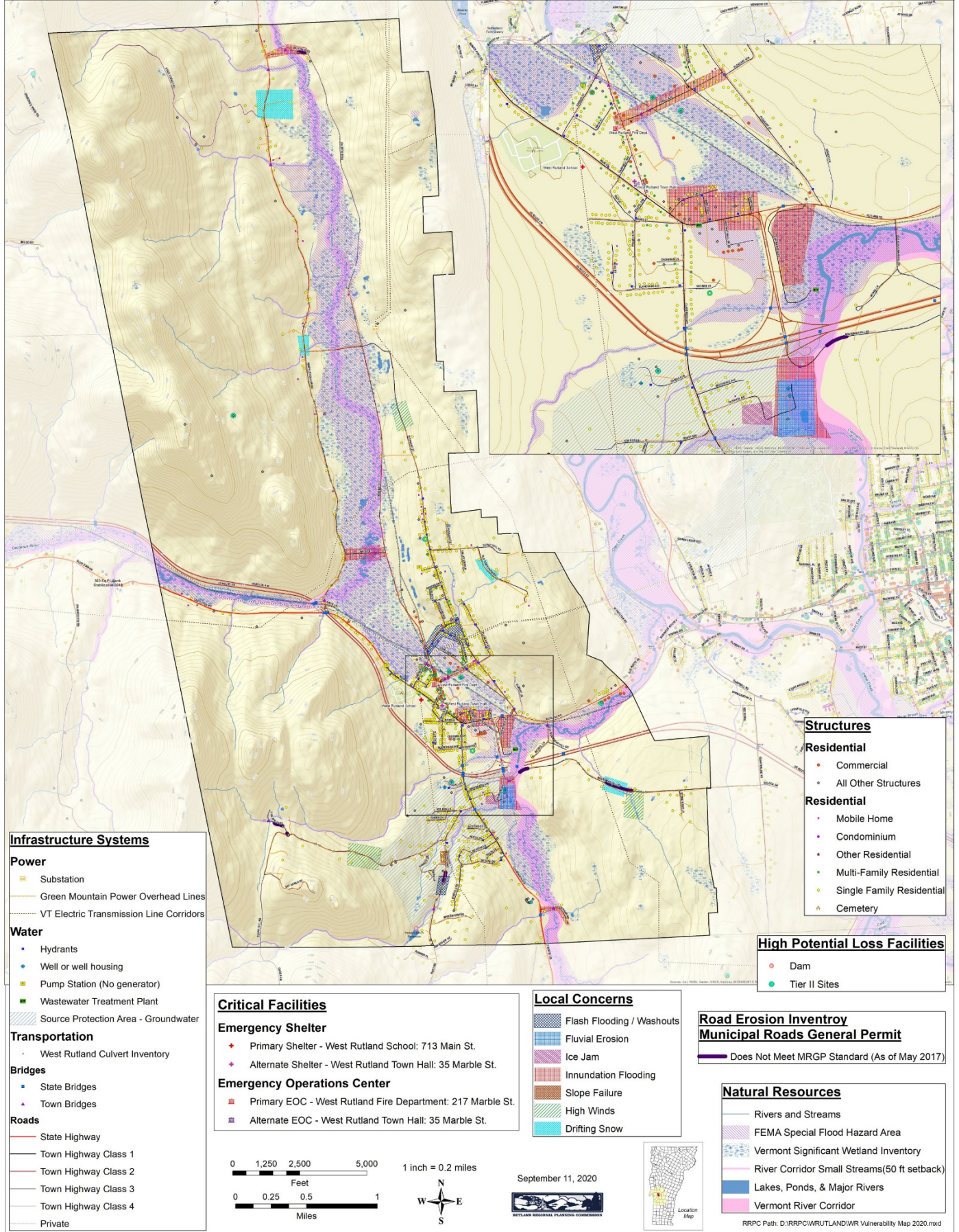
  
Selectboard Chair

ATTEST

  
Town Clerk



# West Rutland, Vermont: Local Natural Hazards and Vulnerabilities Map



<i>PRIORITY SCORE</i>	MITIGATION ACTION	Who is Responsible	Approx. Time Frame & Potential Funding Sources	Initial Implementation Steps	2021 Status
36	Install generator at Municipal Water Supply station.	Water District	<ul style="list-style-type: none"> <li>• Work presently ongoing</li> <li>• Local Resources, HSU funding</li> </ul>		Complete
36	Increase vault size and properly insulate to protect town records over the long-term.	Selectboard	<ul style="list-style-type: none"> <li>• Short term</li> <li>• Local resources</li> </ul>	To be completed with building renovations	Complete
35	Complete renovations to Town Hall to reduce structural instability caused by water damage and fire risk caused by old wiring.	Selectboard	<ul style="list-style-type: none"> <li>• Short term</li> <li>• Local resources</li> </ul>	Renovations planned to be undertaken within next couple of years	Complete
34	Incorporate proposed strategies into Annual Budget and/or Capital Improvement Plan	Selectboard	<ul style="list-style-type: none"> <li>• Short-Term</li> <li>• Local Resources</li> </ul>	Incorporated in next Budget Cycle	Ongoing – remains a priority
33	Examine Town Plan to ensure identified hazard areas are addressed	Planning Commission/ Selectboard	<ul style="list-style-type: none"> <li>• Med-term</li> <li>• Municipal Planning Grant</li> </ul>	Incorporated in next Town Plan update	Ongoing – remains a priority
32	Deal with high accident rate at the intersection of Route 4A and the access road to Route 4 bypass.	Selectboard	<ul style="list-style-type: none"> <li>• Med Term</li> <li>• Local and State Resources, DOT Grant # 20.217 (Motor Carrier Safety)</li> </ul>	Encourage State to pursue solutions	Complete