

# Wolcott, VT Local Hazard Mitigation Plan

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2015 - 2020

**This plan was developed by the Town of Wolcott, with assistance from the  
Lamoille County Planning Commission**

**Approval Pending Adoption from FEMA September 23, 2015**

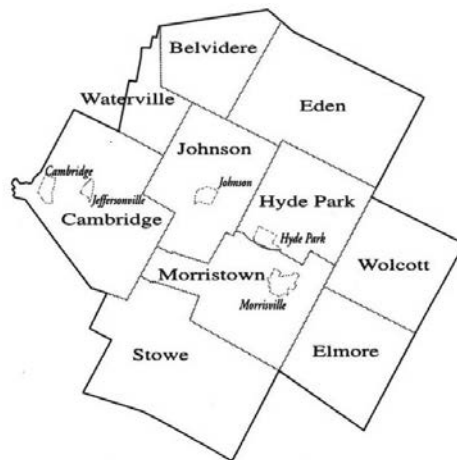
**Adopted on DATE October 7, 2015**

**FEMA Approval Date **November 19, 2015****

**Plan Expiration Date **November 19, 2020****

## Table of Contents

1. Introduction.....	4
1.1 Purpose.....	4
1.2 Community Background and Changes in Development.....	5
2. Planning Process and Maintenance.....	7
2.1 Planning Process and Public Participation.....	7
2.2 Plan Maintenance Process.....	9
2.3 Existing Plans, Studies, Reports and Technical Information.....	10
3. Hazard Identification and Risk Assessment .....	
3.1 Hazard Identification, Probability, Vulnerability, and Impact .....	11
3.2 Significant Hazards.....	14
Flood Inundation/Flash Flood .....	14
National Flood Insurance Program.....	16
Winter Storm/Ice Storm .....	17
Severe Storms, Including Thunderstorms, Windstorms and Hurricanes/Tropical Storms .....	24
3.3 Moderate Threat Hazards.....	25
Major Highway and Railway Accidents.....	25
Structure Fire.....	26
Power Outage .....	27
Drought.....	27
4. Mitigation Strategy .....	
4.1 Hazard Mitigation Goals.....	29
4.2 Mitigation Strategies, Prioritization, and Implementation.....	29
4.2 Integration of Mitigation Plan into Other Planning Mechanisms.....	32
4.4 Additional Hazard Mitigation Programs, Projects and Activities .....	38
Appendix A Supplemental Maps .....	41
Floodplain .....	42
Critical Facilities.....	43
Transportation Concerns.....	44
Areas of Local Concern .....	45



**Town of WOLCOTT Plan Adoption Resolution**

**Approving the WOLCOTT Local Hazard Mitigation Plan**

The Selectboard of the Town of WOLCOTT find that:

- A) The adoption of a multi-hazard plan is required as a condition for communities to remain eligible for future Federal Emergency Management Agency (FEMA) mitigation grant funds.
- B) The Town of WOLCOTT has prepared the *Town of WOLCOTT, VT Local Hazard Mitigation Plan*, a copy of which is attached as Exhibit A and incorporated herein by reference.
- C) The Selectboard has reviewed and considered the *WOLCOTT Local Hazard Mitigation Plan*.
- D) The mitigation strategies and actions identified in the plan have been prioritized as outlined in the *WOLCOTT Local Hazard Mitigation Plan*. Adoption of this Plan demonstrates WOLCOTT's commitment to implementing mitigation actions to reduce damage from identified hazards.

NOW THEREFORE,

BE IT RESOLVED BY THE SELECTBOARD OF THE TOWN OF WOLCOTT, A MUNICIPALITY OF THE STATE OF VERMONT, AS FOLLOWS:

Section 1. Based on the above findings, which are hereby adopted, the *WOLCOTT Local Hazard Mitigation Plan* attached as Exhibit A is approved as the official multi-hazard mitigation plan for the Town of WOLCOTT.

Section 2. This resolution shall become effective immediately upon adoption.

The foregoing Resolution is hereby adopted this 17<sup>th</sup> day of October, 2015

Selectboard Chair *Belinda Auger*

Selectboard Member *[Signature]*

Selectboard Member *[Signature]*

Selectboard Member *Bessie Martin*

Selectboard Member \_\_\_\_\_

Town Clerk received \_\_\_\_\_

## 1. Introduction

The impact of expected, but unpredictable natural and human-caused events can be reduced through community planning. The goal of this plan is to provide all-hazards local mitigation strategies that make the community of Wolcott more disaster resistant.

Hazard Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Based on the results of previous Project Impact efforts, FEMA, state, regional, and local 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 of 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 what local actions can be taken to reduce the severity of incidents.

Hazard mitigation reduces exposure and vulnerability to hazards. Using FEMA mitigation methods, a community can **avert** the hazard by redirecting the impact by means of a structure or land treatment, **adapt** to the hazard by modifying structures or standards, or **avoid** the hazard by stopping or limiting development and could include projects such as:

- Flood-proofing structures
- Tying down propane/fuel tanks in flood-prone areas
- Elevating furnaces and water heaters
- Identifying & modifying high traffic incident locations and routes
- Modifying infrastructure to ensure adequate water supply after a hazard event
- Elevating structures or utilities above flood levels
- Identifying & upgrading undersized culverts and bridges
- Proactively planning for floodplains and other flood-prone areas
- Improving and constructing roads to avoid or lessen hazard impacts
- Ensuring critical facilities are retrofitted or safely located outside of hazard areas
- Buying out &/or relocating structures in harm's way
- Establishing and enforcing appropriate building codes that minimize risks and impacts
- Disseminating public information about ways to construct, relocate, or retrofit property to avoid hazard impacts.

### 1.1. Purpose

The purpose of this Local Hazard Mitigation Plan is to assist the Town of Wolcott, Vermont in recognizing hazards facing their community and identify strategies to begin reducing risks from acknowledged hazards. Wolcott strives to be in accordance with the strategies, goals, and objectives of the State Hazard Mitigation Plan, including an emphasis on proactive pre-disaster

flood mitigation for public infrastructure, good floodplain and river management practices, and fluvial erosion risk assessment initiatives.

Previous Wolcott Hazard Mitigation Plans were developed as an annex to the Lamoille County Multi-Jurisdictional All-Hazards Mitigation Plan. This plan is a single jurisdictional plan for the Town of Wolcott. This Plan has been reorganized and new sections have been added. Old assumptions have been challenged throughout and new information has been added to make the plan stronger, tailored to Wolcott, and more useful for Wolcott officials and residents who will implement the hazard mitigation strategies in the future. Much thought has gone into developing the mitigation strategies and actions and to prioritizing what is feasible and achievable over the next five years.

Ultimately, the purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. This Plan aims to do just that through implementing strategies that meet the following Wolcott hazard mitigation goals:

- Provide the technical support for, and aid in the development of implementation protection mechanisms at the local level that will serve to avoid land use investments that would be, over time, endangered by, incompatible or in conflict with fluvial adjustment and erosion processes, and landslides
- To reduce injury and losses from the natural hazard of flash floods, flooding, and fluvial erosion; extreme cold, snow, and ice storm; severe storms, windstorms, hurricanes, and tropical storms; power outages; and other severe weather events.
- Ensure that emergency response services and critical facilities functions are not interrupted by natural hazards.
- Provide adequate communication systems for emergency personnel and response units.
- Provide residents with adequate warning of potential hazards.
- Encourage hazard mitigation planning as a part of the local planning process

## **1.2. Community Background and Changes in Development**

Wolcott is the easternmost town in Lamoille County. The town abuts Hyde Park to the west, Elmore to the south, and the Orleans county towns of Hardwick to the southeast and Craftsbury to the northeast. It is located 52 miles from Burlington and 26 miles from Montpelier. There are three major bodies of water in the town and numerous private ponds under one acre in size. The most significant body of water is the 68 acre Wolcott Pond, followed by the 21 acre man made Wapanaki Lake. The Lamoille River flows from the southeast to the northwest across the southern part of Wolcott for about 8 miles. There are five major tributaries to the Lamoille in the town, making some parts of town more vulnerable to flooding than others.

Wolcott is a predominantly rural, residential community. Wolcott has two pockets of concentrated growth with other residents scattered throughout the rural countryside. The main town center is located directly on Vermont Route 15– the region’s major east-west travel corridor– adjacent to the Lamoille River. North Wolcott is not a defined village center but its residents have their own identity, with clustered homes hugging the North Wolcott Road, locally operated businesses, and town recreation fields built parallel to a tributary of the Lamoille River. Lamoille County is one of the fastest growing counties in Vermont, at a time when other counties are shrinking. This trend is exemplified in Wolcott; between 2000 and 2010 the town’s

population increased from 1,456 to 1,676 residents (15.1%). Much of Wolcott's dispersed population commutes to other communities for employment although working landscapes contribute much of the local economy and social fabric.

During 2000 – 2010, new home construction kept pace with population growth, as the number of housing units in town increased by 14% (from 646 to 756). The majority of housing units in the Town are single unit detached (79%). Mobile homes account for approximately 16% of the household units; 4.6% of the occupied units have accessory apartments.

*This section of the plan satisfies 44 CFR 201.6(d)(3), or D3 of the Plan Review Tool.*

While Wolcott experienced steady population growth through the 1990s and early-2000s, the economic recession of the late-2000s substantially depressed new construction. According to members of the Wolcott Planning Commission, very little new construction has occurred within the last three years. The Wolcott zoning and subdivision bylaws direct higher densities to existing growth centers along Route 15 and within the traditional village area. Accordingly, there have been no substantial changes in development patterns that would necessitate a major shift in mitigation priorities from the previously adopted LHMP. Through the zoning and flood hazard bylaws, growth is directed away from the 100-year floodplain and the Planning Commission is exploring stronger flood hazard regulations to protect existing developments in and future development from the 500-year floodplain.

There are two utilities that provide service to the Town: Hardwick Electric Department (HED) and Morrisville Water and Light Department (MWL). HED, which provides electricity to a majority of the town, owns and operates a run of the river hydro dam on the Lamoille just upstream from Wolcott Village (Pottersville Dam). MWL provides electrical service to residents on the west side of town. There is one 15-30kw privately owned hydroelectric plant on Baldwin Brook, a tributary of the North Branch.

Locally, fire coverage is provided primarily by the volunteer Wolcott Fire Department. The fire station is located on School Street. The Wolcott Fire Department participates in the Lamoille Mutual Aid Association (LMMA), which functions as a mutual aid response network among all eight Lamoille County fire departments. Additionally, they have a special arrangement with Elmore whereby both departments respond to each other's calls. The Town relies on the Hardwick Emergency Rescue Squad Inc., a non-profit volunteer ambulance service that provides emergency transport and medical care. The Morristown Rescue Department, in neighboring Morristown, assumed coverage over Tjader road and Richard Woolcutt Road in 2002 to help improve response times to the southwest corner of town.

Medical care is provided by Copley Hospital in Morrisville– a 25-bed full service community hospital for acute, outpatient and long-term care. More specialized services are available in Burlington, Berlin and Hanover, New Hampshire. The Hardwick Area Health Center also provides clinical and primary care services to seven communities, including Wolcott. Additional outpatient care is available at other community clinics available in neighboring towns. All Wolcott residents must travel outside the community for health services.

Primary law enforcement coverage is provided by the Lamoille County Sheriff's Department (LCSD), located in nearby Hyde Park. The Town of Wolcott contracts with LCSD for 24-hour patrol coverage and police support. The Vermont State Police, dispatched from Williston (47 miles from town), provide emergency and back-up coverage as requested by the Sheriff's Department. There is also an elected constable. Crime rates in Wolcott are consistently among the lowest in Lamoille County.

The town adopted a Local Emergency Operations Plan (LEOP) in 2014. Essential facilities identified in the LEOP include the Town Offices, the Mennonite School, and the Wolcott Elementary School, each of which may function as an emergency operations center and all of which are certified Red Cross emergency shelters.

Wolcott's guiding regulatory documents are zoning and subdivision regulations, flood hazard regulations, and road standards. The zoning, subdivision, and flood hazard regulations were last updated in 2005. Currently, the Wolcott Planning Commission is beginning to undertake an update to these regulations. Potential changes to the regulations aim for stronger development standards in the 500-year floodplain, stronger protections for the working landscape, and language that encourages a form-based code approach to village center structures and streetscape. These documents have the potential to influence development patterns and rates. It is likely that changes to the regulations will be incorporated into the next update of this hazard mitigation plan.

***What is the LEPC?***

*Local Emergency Planning Committees are established through State and Federal Statute. They provide resources and guidance through education, coordination, and assistance in all-hazard mitigation, preparedness, response, and recovery planning to assure public health and safety. Membership of LEPC 11, covering all of Lamoille County, includes the 10 Emergency Management Directors, public health, emergency medical services, law enforcement, fire departments, state and regional representatives, and others.*

For municipal technical assistance, transportation planning, and emergency planning and preparedness, Wolcott works closely with the Lamoille County Planning Commission (LCPC). LCPC is one of Vermont's 11 Regional Planning Commissions and is enabled and funded by the State of Vermont to provide assistance to municipalities. LCPC was enlisted to provide assistance in developing this hazard mitigation plan.

**2. Planning Process and Maintenance**

**2.1 Planning Process and Public Participation**

The LHMP was originally adopted in 2005 and again in 2014. During that time, staff from LCPC and the town remained involved in the plan maintenance process through communication and support in the regular Local Emergency Planning Committee 11 (LEPC) meetings, participation in emergency response trainings and exercises (e.g. NIMS), a municipal plan update, and actual hazard/disaster response and post event evaluation.

Due to reasons beyond the control of the Town of Wolcott and the LCPC, Wolcott's annex to the Multi-jurisdictional All-hazards Mitigation Plan for Lamoille County was adopted in February

2014. Wolcott’s annex to the regional hazard mitigation plan was submitted to FEMA for review starting in December 2012. The plan received approval pending adoption in January 2014. The Selectboard adopted the plan in February of that same year. In 2013, LCPC received grant funding to develop single jurisdiction plans for five communities, including Wolcott. While the annex plan was under review by FEMA, LCPC began the planning process to transition the annex into a single jurisdiction plan. For simplicity, a brief outline of Wolcott’s hazard mitigation plans is below:

Through Pre-Disaster Mitigation (PDM) funding from FEMA, a small group of communities agreed to work with LCPC to update their hazard mitigation plans, transitioning away from the Lamoille County Regional All-Hazards Mitigation Plan. Updating the hazard mitigation plans for Cambridge, Hyde Park, Johnson, Stowe, and Wolcott provided an opportunity for communities to discuss hazard threats together. For this most recent plan update, LCPC organized an initial Hazard Mitigation Plan kick-off meeting for all five communities, held on December 10, 2013. The kick-off meeting, held at the Hyde Park Municipal Office, explained the purpose of hazard mitigation plans and collected stories on the history of hazards in the community while bringing together a diverse group of stakeholders. Selectboard members, Village Trustee members, Planning Commissions, Town Administrators, Road Foremen, School District officials, Emergency Management Directors (EMDs), town clerks, and emergency responders attended. A broader effort to increase attendance and participation was also made through connections with various organizations serving the larger community. The Division of Emergency Management and Homeland Security (DEMHS) discussed the role of a hazard mitigation plan and federal grant programs. The Vermont River Management Program discussed their role of working with communities to improve flood resiliency.

Following the initial kick-off meeting, LCPC met with members of the Wolcott community at a public meeting on October 8, 2014, to identify and discuss threats, hazards, and possible mitigation strategies. Those in attendance later provided mitigation strategy feedback through phone calls and email correspondence with LCPC and with one another. Community members unable to attend the meeting were invited to send comments in via email, by phone, or in-person to LCPC or the Town Clerk.

In mid-October 2014, a draft of the Plan was circulated among municipal officials and to neighboring towns, the LEPC, LCPC’s Board of Directors, the Vermont Floodplain Management Coordinator, the Vermont Department of Environmental Conservation (DEC) River Management Section, and Vermont DEC Watershed Coordinator. After receiving and incorporating feedback from stakeholders, LCPC met with the Wolcott Selectboard at a publicly warned meeting on November 17, 2014 to review the complete draft plan, including hazards, vulnerable structures and areas of concern, and mitigation strategy prioritization.

The overall process involved multiple planning meetings; reviewing past hazard mitigations plans; reviewing and updating selected hazards, including the update of hazard maps and figures; and determining the status of previous mitigation action items and creating new mitigation action items in accordance with new or developing threats. LCPC staff and volunteer committee members reviewed components of the last annex updated and changes to the hazard

*This section of the plan satisfies 44 CFR 201.6(b)(1), or A3 of the Plan Review Tool.*



risk assessment and planning process as well as the mitigation strategies. Notes from meetings and copies of correspondence are available by contacting LCPC.

Wolcott hazard mitigation meetings focused on assessing past mitigation projects and compiling information on its current and future hazard mitigation programs, projects and activities. The following individuals served on the Wolcott Hazard Mitigation Advisory Committee:

Belinda Clegg	Wolcott Selectboard, Assistant Town Clerk
Bessie Martin	Wolcott Selectboard
Linda Martin	Wolcott Town Clerk, State Representative
Skip Patten	Wolcott Highway Department
Jim Ryan	Vermont DEC Watershed Coordinator, Farmer, Wolcott Resident
Melinda Scott	LCPC GIS Planner

Once the draft was updated and preliminarily approved by the Selectboard, a copy of the plan was located in the Town Office for public review and a notice for public comments of the draft update was placed online – on the Town website, LCPC’s website, and LCPC’s Facebook page. Announcements were also posted on Front Porch Forum, an online community bulletin board. Notices were sent to adjacent municipalities providing them the opportunity to comment on the plan. Notices and announcements at the LEPC meetings provided neighboring community members and regional stakeholders with the opportunity to review and comment on the plan. The draft update was also available by request from LCPC for public review and comments 12/01/2014 – 12/14/2014. The plan was then submitted to FEMA for review and approval.

*This section of the plan satisfies 44 CFR 201.6(b)(2), or A2 of the Plan Review Tool.*

Feedback received from the public, public officials, businesses, and emergency management officers throughout the year that the plan was developed was incorporated into the plan at all stages. Gathering oral histories, prioritizing hazards and mitigation strategies, and discussing where the public needs are most relevant was used to form this plan. Without that input and support the plan would be lacking a crucial element and motivation for mitigation. Without listening to and considering everyone’s experiences with hazard mitigation, the Selectboard and other municipal officials most involved with this plan update would not have had a broad input to consider.

*This section of the plan satisfies 44 CFR 201.6(c)(4)(i) and (iii), or A5 and A6 of the Plan Review Tool.*

## **2.2 Plan Maintenance Process**

FEMA requires hazard mitigation plans to continue public participation in the plan maintenance process and to describe a method and schedule for keeping the plan current, such as monitoring, evaluating, and updating the mitigation plan within a five year cycle. To do this, the Wolcott Local Hazard Mitigation Plan will be reviewed by the local Planning Commission eighteen months prior to its expiration. The EMD and Selectboard Chair will consider updates to the plan within six months after every federal disaster declaration impacting Wolcott and as amendments to local regulations come into effect. Stakeholders mentioned above will be included in the plan update process, which may include, but not be

limited to, the EMD, Selectboard, Zoning Administrator, Town Clerk, Fire Chief, School Board, ANR, business leaders, the public, and other interested parties as appropriate. LCPC will help with updates or if no funding is available, the EMD will update the plan.

Beyond that, the method of evaluating and updating the plan will include continued public participation through public notices posted on the municipal website, notice in the municipal building, Front Porch Forum, LCPC newsletter and website, and other forms of media inviting the public to the scheduled Selectboard meeting.

The maintenance updates over the next five years may include changes in community mitigation strategies; new town bylaws and planning strategies; progress of implementation of initiatives and projects; effectiveness of implemented projects or initiatives; and evaluation of challenges and opportunities. The plan is to be a “living document” to allow for new actions to be identified in the five year interim period and amended without formal re-adoption during regularly scheduled Selectboard meetings. In the future, a wider public participation approach may be pursued, providing available funding and resources are established. The cost of updating a hazard mitigation plan requires outside funding. As resources are limited, extensive public outreach will be considered but may be limited to more economical methods such as open public meetings and utilizing social media.

Wolcott shall also continue incorporating mitigation planning into their long term land use and development planning documents. It is recommended the Town review and incorporate elements of the Local Hazard Mitigation Plan when updating the municipal plan, subdivision regulations, and flood hazard bylaws. The incorporation of the Local Hazard Mitigation Plan into the municipal plan and flood hazard bylaws will also be considered after declared or local disasters.

In order to effectively incorporate mitigation strategies into these existing planning mechanisms, it is important to demonstrate how these approaches maximize benefit to the entire community. This can be achieved through the utilization of a cost-benefit analysis, which quantifies the benefits of mitigation against anticipated losses. Such an analysis is an integral part of prioritizing potential mitigation strategies and actions, and is also a requirement for submitting future FEMA mitigation grant applications.

The Town’s staffing capacity is limited so the Town works closely with the Lamoille County Planning Commission. LCPC provides technical assistance to the town on geomorphic assessments, infrastructure improvements, and Hazard Mitigation Grant Program applications and projects.

### **2.3 Existing Plans, Studies, Reports, and Technical Information**

To develop this plan and to provide Wolcott with relevant information necessary to develop hazard mitigation strategies, stakeholders and LCPC reviewed and incorporated existing plans, studies, reports, and technical information into this plan. The following resources were utilized, and are referenced throughout this plan:

- i. Town of Wolcott VT Municipal Development Plan 2013 - 2018

- ii. Town of Wolcott Zoning and Flood Hazard Regulations 2005
- iii. 2014 Wolcott Emergency Operations Plan
- iv. Wolcott Town Road and Bridge Standards 1/8/2014
- v. Wild Branch River Corridor Plan 3/18/2010
- vi. Lamoille River Corridor Plan 12/15/2010
- vii. Wild Branch and Lamoille River Fluvial Erosion Studies/ Maps
- viii. Wolcott Flood Insurance Rate Maps
- ix. Wolcott Flood Insurance Study
  - x. 2013 State of Vermont Hazard Mitigation Plan
- xi. 2011 Lamoille County Regional All-Hazards Mitigation Plan and Wolcott Annex dated 2/19/14
- xii. National Oceanic and Atmospheric Administration’s National Climatic Data Center
- xiii. United States Geologic Survey website
- xiv. National Weather Service Advanced Hydrologic Prediction Service
- xv. American Community Survey 2005- 2010
- xvi. U.S. Census, 2010
- xvii. Vermont Agency of Transportation, website and staff
- xviii. Vermont Division of Emergency Management and Homeland Security
- xix. Vermont Agency of Natural Resources, websites and staff
  - xx. Emergency Response Guidebook 2012
- xxi. National Flood Insurance Program website and promotional materials
- xxii. Lamoille County Erosion Study Final Report, February 2014
- xxiii. Vermont Center for Geographic Information shapefiles

*This section of the plan satisfies 44 CFR §201.6(b)(3), or A4 of the Plan Review Tool.*

**3. Hazard Identification and Risk Assessment**

**3.1 Hazard Identification, Probability, Vulnerability, and Impact Summary**

The following natural and human caused disasters were discussed and the most significant threat hazards were identified based upon the likelihood of the event and the community’s vulnerability to the event. Hazards not identified as a “significant threat” may still occur. Greater explanations and mitigation strategies of moderate threat hazards can be found in the State of Vermont’s Hazard Mitigation Plan.

This section profiles hazards and covers a breadth of factors including location, extent, probability, and impacts, all of which are covered somewhere in the risk assessment. By profiling and analyzing the hazards, the plan provides an understanding of those hazards which are of greatest concern to the community and because of community vulnerability, a priority for mitigation. Vulnerability was arrived at by consider the location, extent, impact of the hazards.

**Omission statement per FEMA:** Likely natural hazards that may impact the community have been identified and described. While any of the following can occur, common sense and the “probability”, “vulnerability”, and “biggest risk of impact” columns omit them from further examination in the plan. The people who participated in the planning process decided which

human caused hazards are included on the basis of greatest threat, understanding that there may be others that could occur. For more information, see the Vermont State Hazard Mitigation Plan.

<b>Hazard</b>	<b>Probability<sup>1</sup></b>	<b>Community Vulnerability<sup>2</sup></b>	<b>Biggest risk of impact<sup>3</sup></b>
Flood inundation and flash floods	High	High	Infrastructure Transportation network Structure damage
Severe storms, including windstorms, hurricanes and tropical storms	Medium	High	Transportation network and access (debris) Structure damage Power outages
Winter storms and ice storms	High	High	Transportation access (debris) Power outages Structure damage Bodily injury or loss of life
Major highway accidents	High	Low	Transportation network Bodily injury or loss of life Damage to personal property
Structure fire	Medium	Moderate	Structure damage Loss of life
Municipal Services / Power Failure	Medium	Moderate (seasonally dependent)	Health impacts Economic impacts
Drought	Medium	Moderate	Agriculture Economic vulnerability
Hazardous materials spill	Unlikely	Low	Environmental / ecological damage Public health
Dam Failure	Rare	High	Flash flooding – flood-induced impacts Bodily injury or loss of life
Major hailstorm	Rare	Low	Property damage
Major wildfire/forest fire	Rare	Moderate	Economic vulnerability Structure damage Bodily injury or loss of life
Landslide	Unlikely	Low	Flood-induced impacts
Earthquake	Rare	Low	Structure damage Infrastructure damage

1 High: 90% - 100% probability of happening in the next year.  
 Medium: 50% to 90% probability of happening in the next year.  
 Unlikely: 10% - 50% probability of happening in the next year.  
 Rare: 0 – 10% probability of happening in the next year.

<sup>2</sup> Hazards are rated on a scale of Low – Moderate – High based on the community’s susceptibility to the hazard, disruption of daily functions, and damage to structures.

<sup>3</sup> Key areas of the community affected by the hazard.

			Power outage Bodily injury or loss of life
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The following hazards were found to be most significant in the town, based on the probability and vulnerability:

- Flood inundation and Flash Flooding
- Severe Storms
- Winter Storms and Ice Storms

Moderate threat hazards include:

- Major highway accident
- Structure Fire
- Power Failure
- Drought

Moderate threats with low impacts or rare/ unlikely hazards include:

- Hazardous Materials spills
- Landslide
- Hailstorm
- Earthquake
- Dam Failure

A more detailed discussion of each significant hazard is included in the proceeding subsections. Maps identifying vulnerable infrastructure are attached (See maps titled *Areas of Local Concern* and *Transportation Concerns*) Moderate hazards are also discussed in the proceeding subsection. Each subsection includes a list of past occurrences based upon County-wide FEMA Disaster Declarations (DR-#) plus information from local records, a narrative description of the hazard and a hazard matrix containing the following overview information: Information about moderate threats with low impacts or rare/ unlikely hazards can be found in the Vermont State Hazard Mitigation Plan. They are not profiled in this plan.

<b>Hazard</b>	<b>Location</b>	<b>Vulnerability</b>	<b>Extent</b>	<b>Impact</b>	<b>Probability</b>
Type of hazard	General areas within municipality which are vulnerable to the identified hazard.	Types of structures impacted	Magnitude of hazard – scale dependent on hazard	Dollar value or percentage of damages	High: 90% - 100% probability of happening in the next year. Medium: 50% to 90% probability. Unlikely: 10% - 50% probability. Rare: 0 – 10% probability.

## 3.2 Significant Hazards (Flooding, Winter Storms, Severe Storms)

### **Flood Inundation/Flash Flood**

Flooding/flash flooding/ fluvial erosion is Wolcott's most commonly recurring hazard. The community vulnerability to a flood is high and likelihood of occurring is frequent. Flooding is the overflowing of rivers, streams, drains, and lakes due to excessive rain, rapid snow melt, or ice. Flash flooding is a rapidly occurring flood event usually from excessive rain. Fluvial erosion is the process of natural stream channel adjustments. Fluvial erosion causes erosion of sediment in some areas, while causing aggradation of sediment in other. Fluvial erosion processes occur more quickly and severely during flood events. The fluvial erosion corridor, which is the channel, moves with the flow of water and sediment.

Flooding of land adjoining the normal course of a stream or river has been a natural occurrence since the beginning of time. If floodplain areas were left in their natural state, floods would not cause significant damage. Development has increased the potential for flooding because rainfall that used to soak into the ground or take several days to reach a body of water now quickly runs off streets, parking lots and rooftops, and through human-made channels and pipes. Other factors that affect the severity of a flood include: steeply sloped watersheds; re-grading or filling in or near the edge of floodplains, which obstructs flood flows and backs up water; bridges, culverts, and other obstructions; debris from the watershed; contamination, including soil road oil, farm/lawn chemicals, and animal waste.

A floodplain is made of the floodway (the stream channel and portion of the floodplain that must remain open to permit passage of water without raising the water surface elevation by more than one foot) and the flood fringe (the portion of the floodway outside the floodway).

Floods are often measured by their chance of flooding in any given year and by the water surface elevation. The Special Flood Hazard Area, as designated by FEMA Flood Insurance Risk Maps (FIRM), identifies the 100-year flood and the 500-year flood. The 100-year flood designation applies to areas with a 1% chance of flooding in any given year. A 100-year flood may occur two years in a row or not occur for ten years. The 100-year flood is known as the base flood. This is the standard by which the NFIP is based. The base flood represents a compromise between minor floods and the greatest flood likely to occur in a given area. Base flood elevations are indicated on the FIRM and in the Flood Insurance Study.

*History of Occurrences:* Floods are the most probable natural cause of emergencies or disaster in Wolcott. The Town is located predominantly within a river valley, with the Lamoille River following Route 15 east-west across town and the Wild Branch and Elmore Branch Rivers each feeding the Lamoille going north - south. High-elevation ponds and rivers have been one notable cause of flooding in the past. Advance weather prediction is not always accurate and extreme precipitation can develop without adequate warning. Flooding, especially flash flooding, can impact areas in town that are located near designated floodplains. Although spring thaws and ice breakups may cause some lowland flooding, summer or fall storms are more likely to be responsible for major flooding. Water contamination of private wells and springs is a potential problem during flood events.

Wolcott historically has recorded numerous floods. Annual flood events are common in some form. The floods of 1927, 1981, 1983, 1995, 1997, 1999, 2008, and 2011 caused significant damage that reverberates today. During severe rain events, Wolcott village has been temporarily evacuated as the Lamoille River rises (the village area is very small and evacuation is noticed by a LCSD patrol car). Damage covers a wide range from flooded cellars, roads washed out and bridge and culvert damage. However, flood waters usually recede quickly, as the Lamoille flows east through Morrisville, Johnson, and eventually onward to Lake Champlain. Water contamination of private wells and springs is also a potential problem during major flood events. The town does not have pumps or any alternate water delivery/supply system established should flooding contaminate the small community water system on School Street.

In general, roads, bridges, residences, and businesses along the Lamoille and Wild Branch Rivers have experienced repeated damage caused by flooding. Areas within Wolcott Village Center are subject to some extent of flooding almost annually. Roads that are frequently subject to flood damage and temporary closure include Vermont Route 15, School Street, and North Wolcott Road. See maps in Appendix A for flooding extent.

North Wolcott Road is a special concern because of the highly unstable condition of the Wild Branch River and close proximity of the road and several residences to the river. Large storm events have the potential to cause further river bank erosion and damage to nearby infrastructure.

The Town has noted in the 2013 Municipal Development Plan that the current location of the Town Garage and Fire Station within the 500-Year Floodplain is a concern. Though it hasn't happened in the past, there is the potential in a significant flooding event for these critical facilities to be isolated.

A history of major flood events, and costs, that resulted in federal disaster declarations, starting in 1995, is listed below.

<b>Year</b>	<b>Disaster Declaration</b>	<b>Description of Damages</b>	<b>Cost to Wolcott</b>
1995	DR-1063	Record setting heavy rains caused flooding in six north-central VT counties. This was the first time since 1927 that a flood not only affected public infrastructure but also personally impacted the residents of Wolcott. Preliminary damage assessments indicated individual losses greater than damages to infrastructure. Flood levels exceeded the 500-year event in several areas along the Lamoille River.	\$1,023,735
1997	DR-1184	Excessive rain in several northern Vermont counties caused flash flooding and destruction of public and private property	\$415,716

1998	DR-1228	Eleven of the fourteen Vermont counties experienced severe damage from excessive rainfall. The torrential rains came in much the same pattern as they had in the summer of 1997, but occurred further south than the 1997 floods. The flash flooding left many homes destroyed, roads and bridges damaged, and communities cut off from the rest of the state.	\$47,197
1999	DR 1307	The declaration covers damage to public property from the storm that spawned heavy rains, high winds and flooding over the period of September 16-21.	\$3,542
2008	DR-1790	Severe storms and flooding caused a federal disaster to be declared in Addison, Caledonia, Essex, Lamoille, Orange, Washington and Windsor counties on September 12, 2008. More than \$74,226 in federal public assistance funds were used to repair roads and culverts and remove debris.	\$95,000
2011	DR-1995 and DR-4022	Excessive rain and severe floods swept across northern Vermont and the Champlain Valley, with a federal disaster declared for 7 counties, including Lamoille. Flooding and wind damage associated with Tropical Storm Irene led to the extension of a federal disaster declaration for all fourteen Vermont counties.	\$18,000

*The National Flood Insurance Program*

Use of flood insurance claim and disaster assistance information is subject to the Privacy Act of 1974, as amended, which prohibits public release of the names of policy holders or recipients of financial assistance and the amount of the claim payment or assistance. However, maps showing general areas where claims have been paid can be made public. If a plan includes the names of policy holders or recipients of financial assistance and the amount of the claim payment or assistance, the plan cannot be approved until this Privacy Act covered information is removed from the plan.

Wolcott participates in the NFIP and, as of June 2014, had 11 policies in force in town. Between 1978 and 2012, seven claims were filed totaling \$109,696.42. There are no repetitive loss properties in Wolcott. Wolcott is one of two towns in Lamoille County with a digital flood insurance rate map (DFIRM). The Town will continue to regulate and enforce NFIP requirements through its floodplain management ordinance including new and substantially improved construction in Special Flood Hazard Areas and providing floodplain identification and mapping determinations.

As previous events have made clear, however, even areas beyond the NFIP designated 100-year floodplain may be vulnerable to flood related hazards. Channel adjustments with devastating consequences have frequently been documented (see pages 11 – 12 for a list of corridor plans) wherein such adjustments are linked to historical channel management activities, floodplain



encroachments, adjacent land use practices and/or changes in watershed hydrology associated with conversion of land cover and drainage activities, within and beyond the NFIP floodplain.

The Floodplain map (Appendix A) identifies the areas of town that are within the 100-year and 500-year floodplain, and the mapped river corridors. Generally, these include lands adjacent to the Lamoille River and Route 15, running east/west, lands along the Wild Branch and North Wolcott Road running north/south, as well as two large floodplains crossing Town Hill Road in the north part of the Town.

In 2012 and 2013, LCPC worked with the Town to identify culverts in need of updating and sites of existing road erosion. Critical culverts (those less than 25% open and with critical deficiencies) identified in the most recent culvert inventory are shown on the Transportation Concerns map. These culverts are at risk of catastrophic failure during storm events, and can cause whole sections of road to wash out. Likewise, culverts with a diameter less than 50% of bank full width are at risk of catastrophic failure. These culverts should be identified and prioritized for replacement.

The vast majority of flood damage in Wolcott has been sustained by road infrastructure. The Transportation Concerns map identifies areas of potential damage to transportation infrastructure due to erosion and road flooding. Wolcott annually has been performing maintenance to and replacement of culverts that have large spalls, heavy scaling, wide cracks, holes, severe scour or erosion, extreme distortion/deflection or that have extensive corrosion. LCPC will continue to work with the Town to further identify problem areas. One culvert known to be undersized and in need of replacement is the East Hill Rd culvert at the Wolcott Brook crossing.

The following matrix provides an overview of the hazard:

<b>Hazard</b>	<b>Location</b>	<b>Vulnerability</b>	<b>Extent</b>	<b>Impact</b>	<b>Probability</b>
Flooding	Route 15, North Wolcott Rd, Flat Iron Rd, East Hill Rd, Keeler Rd, Baldwin Brook Rd, Corley Rd, Elmore Pond Rd, East Elmore Rd	Residences, businesses, community facilities, parks, farmland, bridges, roads, culverts, day care facilities; 22 miles of road and 28 structures are located in SFHA.	100-year flood event covering 100-year floodplain and 500-year flood event covering 500-year floodplain; 1995 and 2011 floods	1995 is the year with the highest damages from a flood event in recent memory. With inflation, costs to public infrastructure could reach as high as \$2,000,000.	HIGH = 90% to 100% probability within the next year.

### **Winter Storm/Ice Storm**

The community vulnerability to a Winter Storm/Ice Storm is *high* (see Table 3.1).

History of Occurrences (county wide and with \$5,000 or more of damage costs), 1996 – 2014:

Location	Date	Time	T.Z.	Type	Property Damage (k = \$1,000)
<a href="#">LAMOILLE (ZONE)</a>	1/3/1996	2:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/12/1996	16:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/3/1996	5:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/7/1996	12:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	4/10/1996	6:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	11/26/1996	1:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/7/1996	12:00	EST	Winter Storm	30.00K
<a href="#">LAMOILLE (ZONE)</a>	12/19/1996	6:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/9/1997	22:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/16/1997	3:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/22/1997	3:00	EST	Winter Weather	15.00K
<a href="#">LAMOILLE (ZONE)</a>	1/24/1997	18:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/27/1997	18:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/4/1997	21:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/14/1997	10:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/21/1997	1:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/5/1997	22:00	EST	Winter Storm	25.00K
<a href="#">LAMOILLE (ZONE)</a>	3/14/1997	9:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/21/1997	20:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/25/1997	17:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	4/18/1997	10:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	10/23/1997	20:00	EST	Heavy Snow	5.00K
<a href="#">LAMOILLE (ZONE)</a>	10/26/1997	22:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	11/14/1997	9:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	11/22/1997	9:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/1/1997	0:00	EST	Heavy Snow	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/5/1997	16:00	EST	Heavy Snow	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/29/1997	22:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	1/6/1998	21:00	EST	Winter Weather	25.00K
<a href="#">LAMOILLE (ZONE)</a>	1/15/1998	14:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/23/1998	11:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/23/1998	16:00	EST	High Wind	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/24/1998	12:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/14/1998	10:00	EST	Heavy Snow	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/21/1998	10:00	EST	Heavy Snow	10.00K
<a href="#">LAMOILLE (ZONE)</a>	11/26/1998	12:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/17/1998	0:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/3/1999	2:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/8/1999	17:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/13/1999	2:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/14/1999	15:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/27/1999	20:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	10/4/1999	6:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	11/15/1999	15:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/11/1999	8:00	EST	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	1/2/2000	10:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/3/2000	22:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/16/2000	1:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/25/2000	13:00	EST	Winter Storm	15.00K

<a href="#">LAMOILLE (ZONE)</a>	1/30/2000	23:00	EST	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	2/13/2000	18:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/18/2000	14:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/16/2000	16:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	4/9/2000	10:00	EST	Winter Storm	25.00K
<a href="#">LAMOILLE (ZONE)</a>	4/11/2000	19:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	10/29/2000	10:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	11/26/2000	5:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/19/2000	23:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/31/2000	7:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	2/5/2001	23:00	EST	Winter Storm	50.00K
<a href="#">LAMOILLE (ZONE)</a>	2/9/2001	1:00	EST	Winter Weather	15.00K
<a href="#">LAMOILLE (ZONE)</a>	2/14/2001	6:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/25/2001	4:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/5/2001	17:00	EST	Winter Storm	100.00K – very bad storm
<a href="#">LAMOILLE (ZONE)</a>	3/9/2001	15:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/13/2001	3:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/22/2001	19:00	EST	Winter Storm	50.00K
<a href="#">LAMOILLE (ZONE)</a>	3/30/2001	14:00	EST	Winter Storm	50.00K
<a href="#">LAMOILLE (ZONE)</a>	12/17/2001	15:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/24/2001	1:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/6/2002	21:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/31/2002	21:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/1/2002	0:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/17/2002	5:30	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/20/2002	19:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/26/2002	16:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	11/17/2002	4:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	11/23/2002	6:30	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/4/2003	4:00	EST	Winter Storm	40.00K
<a href="#">LAMOILLE (ZONE)</a>	2/22/2003	16:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/30/2003	20:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	11/14/2003	1:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	12/6/2003	16:30	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	12/14/2003	23:00	EST	Winter Storm	30.00K
<a href="#">LAMOILLE (ZONE)</a>	12/18/2003	3:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/26/2003	5:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/4/2004	1:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/21/2004	14:00	EST	Winter Weather	20.00K
<a href="#">LAMOILLE (ZONE)</a>	4/5/2004	11:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/3/2004	6:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/11/2004	4:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/2/2005	15:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/6/2005	13:00	EST	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/12/2005	12:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/10/2005	13:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	2/16/2005	14:00	EST	Winter Weather	1.00K
<a href="#">LAMOILLE (ZONE)</a>	2/21/2005	1:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/1/2005	21:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/8/2005	20:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/12/2005	16:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	10/23/2005	1:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	10/25/2005	19:00	EST	Winter Storm	100.00K –very bad storm

<a href="#">LAMOILLE (ZONE)</a>	11/22/2005	20:00	EST	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	11/24/2005	18:00	EST	Winter Storm	30.00K
<a href="#">LAMOILLE (ZONE)</a>	12/9/2005	9:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/16/2005	12:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/20/2005	13:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/23/2005	21:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/26/2005	10:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/29/2005	0:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/29/2005	21:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/15/2006	3:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/25/2006	20:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/29/2006	18:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/6/2006	6:00	EST	Winter Weather	8.00K
<a href="#">LAMOILLE (ZONE)</a>	2/24/2006	4:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/25/2006	15:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/4/2006	5:00	EST	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/14/2006	16:00	EST	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	4/4/2006	18:00	EST	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	10/20/2006	18:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/7/2006	14:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/30/2006	6:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/15/2007	4:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/19/2007	18:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/2/2007	16:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/14/2007	3:00	EST-5	Heavy Snow	200.00K – very bad storm
<a href="#">LAMOILLE (ZONE)</a>	3/2/2007	2:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/5/2007	12:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/16/2007	18:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	4/4/2007	15:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	4/12/2007	8:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	4/15/2007	9:00	EST-5	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	11/16/2007	10:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/2/2007	17:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	12/11/2007	20:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/13/2007	14:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/16/2007	2:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	12/31/2007	0:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	1/1/2008	13:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/11/2008	3:00	EST-5	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/14/2008	3:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/1/2008	11:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	2/5/2008	1:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/6/2008	4:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/9/2008	16:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/12/2008	22:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/26/2008	11:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/1/2008	1:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	3/4/2008	22:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	10/28/2008	22:00	EST-5	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	12/11/2008	19:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/17/2008	1:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/19/2008	13:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/21/2008	9:00	EST-5	Winter Storm	10.00K

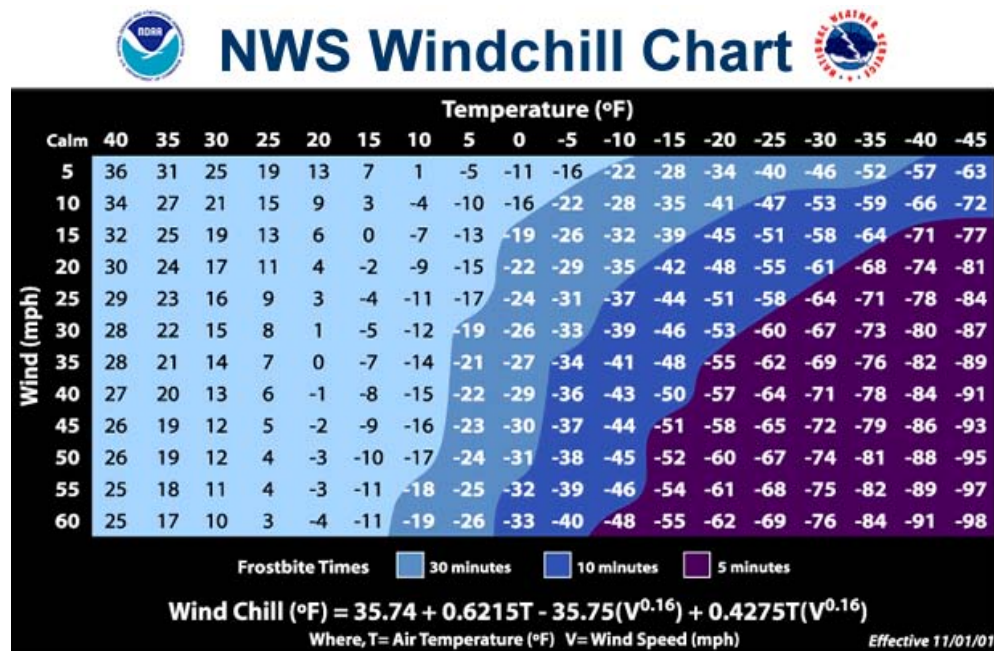
<a href="#">LAMOILLE (ZONE)</a>	1/7/2009	4:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/28/2009	7:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/22/2009	7:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/9/2009	6:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/28/2009	7:00	EST-5	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/2/2010	15:00	EST-5	Winter Storm	25.00K
<a href="#">LAMOILLE (ZONE)</a>	2/23/2010	15:00	EST-5	Winter Storm	100.00K – bad storm
<a href="#">LAMOILLE (ZONE)</a>	4/27/2010	10:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	10/15/2010	9:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/6/2010	5:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/13/2010	13:00	EST-5	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/26/2010	22:00	EST-5	Winter Weather	10.00K
<a href="#">LAMOILLE (ZONE)</a>	1/12/2011	6:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/2/2011	3:00	EST-5	Winter Storm	50.00K
<a href="#">LAMOILLE (ZONE)</a>	2/5/2011	17:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/7/2011	21:00	EST-5	Winter Weather	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/25/2011	8:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/6/2011	12:00	EST-5	Winter Storm	25.00K
<a href="#">LAMOILLE (ZONE)</a>	11/23/2011	0:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/28/2011	12:00	EST-5	Winter Weather	15.00K
<a href="#">LAMOILLE (ZONE)</a>	1/13/2012	10:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	2/24/2012	14:00	EST-5	Winter Storm	20.00K
<a href="#">LAMOILLE (ZONE)</a>	12/22/2012	15:00	EST-5	Winter Storm	5.00K
<a href="#">LAMOILLE (ZONE)</a>	12/26/2012	22:00	EST-5	Winter Storm	15.00K
<a href="#">LAMOILLE (ZONE)</a>	2/8/2013	5:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/20/2013	12:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	3/19/2013	2:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/14/2013	18:00	EST-5	Winter Storm	10.00K
<a href="#">LAMOILLE (ZONE)</a>	12/21/2013	15:00	EST-5	Ice Storm	750.00K – very bad winter storm with mass power outages
<a href="#">LAMOILLE (ZONE)</a>	2/5/2014	3:00	EST-5	Heavy Snow	10.00K
<a href="#">LAMOILLE (ZONE)</a>	2/13/2014	16:00	EST-5	Heavy Snow	15.00K
<a href="#">LAMOILLE (ZONE)</a>	3/12/2014	7:00	EST-5	Winter Storm	20.00K
Storm Events Database, National Climatic Data Center					

As categorized in the table above, a winter precipitation event causes a death, injury, or a significant impact to commerce or transportation but does not meet locally/regionally defined warning criteria. A Winter Weather event could result from one or more winter precipitation types (snow, or blowing/drifting snow, or freezing rain/drizzle) on a widespread or localized basis. A winter weather event which has more than one significant hazard (i.e., heavy snow and blowing snow; snow and ice; snow and sleet; sleet and ice; or snow, sleet and ice) and meets or exceeds locally/regionally defined 12 and/or 24 hour warning criteria for at least one of the precipitation elements, on a widespread or localized basis. Normally, a winter storm would pose a threat to life or property.

A winter storm is a storm that generates sufficient quantities of snow, ice or sleet to result in hazardous conditions and/or property damage. Ice storms are sometimes incorrectly referred to as sleet storms. Sleet is similar to hail only smaller and can be easily identified as frozen rain drops (ice pellets) that bounce when hitting the ground or other objects. Sleet does not stick to wires or trees, but in sufficient depth, can cause hazardous driving conditions. Ice storms are the

result of cold rain that freezes on contact with the surfaces coating the ground, tress, buildings, overhead wires and other exposed objects with ice, sometimes causing extensive damage. Periods of extreme cold tend to occur with these events.

The physical impacts of winter storms are town wide due to the expansive nature of winter storms. Based on past occurrences, the worst anticipated winter weather Wolcott could experience would be 2-3' in 24 hrs of snow with more at higher elevations and several days of power outages. The ice storm of December 2013 demonstrated that sustained power outages are not fatal but advance preparation and planning should be taken by municipal officials and residents.



Scales to measure the extent of winter storms are:

**Heavy snowfall** – Wolcott is significantly affected when they experience an accumulation of 24 inches or more in a 24-hour period.

**Blizzard** – Wolcott is significantly affected when they experience sustained wind speeds in excess of 40 mph accompanied by heavy snowfall or large amounts of blowing or drifting snow.

**Ice storm** – Wolcott is significantly affected when they experience ice accumulations of 1” or greater over a 48 – 72 hour time period.

Winter storms with snow, ice and freezing temperatures in various combinations, are fairly commonplace in Wolcott. The town is geared to handle most winter emergencies. A potential for emergency exists when such storms also result in the loss of electricity, leaving people without adequate heating capability. Heavy wet snows of early fall and late spring cause most power failures, however, ice storms can also cause power outages.

Due to the region’s mountainous terrain, it is not uncommon for precipitation to range from rain in the valley area, to ice in the middle elevations, with heavy snows in the higher terrain. This poses a major challenge to highway maintenance personnel. Wolcott maintains snow removal equipment for all town highways, and Vermont Agency of Transportation maintains equipment for state highways. Snowfalls that are within normal snowfall limits are handled effectively; however, during heavy snowfall for extended periods of time, removal of snow becomes an issue. Historically, these events are not frequent and are short in duration. During such events, radio communications are maintained between highway crews and town emergency responders. Local construction equipment in the community has been used in the past to augment community resources. Most residents are accessible during severe weather conditions, although access may be delayed. In the event of a winter emergency, the Highway Department will assist fire and ambulance crews by making private roads passable.

By observing winter storm watches and warnings, adequate preparations can usually be made to lessen the impact of snow, ice, and sleet, and below freezing temperature conditions on the Town. Providing for the mass care and sheltering of residents left without heat or electricity for an extended time and mobilizing sufficient resources to clear broken tree limbs from roads are the primary challenges facing community officials. The Town encourages residents who are in remote locations to be equipped with generators and backup fuel supplies in the event of prolonged power outages and travel restrictions. The Fire Department can continue to provide outreach and education of the impacts of winter storms to these populations.

Hazardous materials pose a severe threat to a large percentage of the Town’s population as elderly persons within the Town are limited in their ability to shovel roofs and clear around vent pipes. Major snow storms resulting in deep snow drifts can block heating vent pipes causing carbon monoxide poisoning. During snow storms, the Fire Department may experience difficulty reaching customers as the roads due to cleared roads as the town road crew may be busy with snow removal in other areas of town.

Despite frequent occurrences of significant storms, a majority of Town residents are adequately prepared to face these types of events.

The following matrix provides an overview of the hazard:

<b>Hazard</b>	<b>Location</b>	<b>Vulnerability</b>	<b>Extent</b>	<b>Impact</b>	<b>Probability</b>
Winter Storm / Ice Storm	Town wide	Roads, bridges, power lines, senior citizens	12”+ of snow in a 12-hour period; 40 mph wind plus snow; ice accumulations up to 1” over 24 – 36 hour period	\$0 - \$50,000; number of people without power	High probability, 90% to 100%, of occurring within the next year.

## Severe Storms, including Thunderstorms, Windstorms, and Hurricanes / Tropical Storms

The severe storms hazard includes thunderstorms, hurricanes/ tropical storms, and windstorms. Hurricanes and tropical storms are violent rain storms with strong winds that have large amounts of rainfall and can reach speeds up to 200 mph. Hurricane season is between the months of June and November. These types of storms originate in the warm waters of the Caribbean and move up the Eastern seaboard where they lose speed in the cooler waters of the North Atlantic.














Saffir-Simpson Scale for Hurricane Classification				
Strength	Wind Speed (Kts)	Wind Speed (MPH)	Pressure (Millibars)	Pressure
Category 1	64- 82 kts	74- 95 mph	>980 mb	28.94 "Hg
Category 2	83- 95 kts	96-110 mph	965-979 mb	28.50-28.91 "Hg
Category 3	96-113 kts	111-130 mph	945-964 mb	27.91-28.47 "Hg
Category 4	114-135 kts	131-155 mph	920-944 mb	27.17-27.88 "Hg
Category 5	>135 kts	>155 mph	919 mb	27.16 "Hg
Tropical Cyclone Classification				
Tropical Depression	20-34kts			
Tropical Storm	35-63kts			
Hurricane	64+kts or 74+mph			

A severe thunderstorm is a thunderstorm that contains any one or more of the following three weather conditions: hail that is 3/4 of an inch or greater in diameter, winds 58 miles per hour or greater, and/or tornadoes. Severe storm events can occur late spring and early summer as temperatures increase in the summer season. The frequency and intensity of hurricanes, tropical storms, and severe storms is expected to increase with climate change.

Thunderstorms can generate high winds, such as occurred in parts of eastern Vermont on July 6, 1999, downing hundreds of large trees in a few minutes. The extent of severe storms is not well documented in Wolcott. The impact of storms is usually flood related. See extent of flooding in the above flood section. Wind impacts may be town wide. Wind extent from storms is not well documented as there is no monitoring station in Wolcott. However, in December 2010, a damaging windstorm in central and northwest Vermont led to a federal disaster declaration for Chittenden, Franklin, and Lamoille counties.

Estimates for wind are gathered from data off the NCDC website and show speeds in the 50 – 60 knot range during high wind or thunderstorm events. The extent of wind damage is measured using the Beaufort Scale (below right). Debris that is caught in a windstorm has the potential to cause transportation delays, power outages, damage roofs, or clog storm drains and culverts.

## Beaufort Scale

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.



The impacts associated with hurricanes and severe storms are mainly associated with flooding impacts and the potential for damage from debris and fallen trees that could cause power outages. Tropical Storm Irene devastated southern and central Vermont in August 2011. Wolcott sustained moderate damage from this latest storm, with one bridge and 8 road segments incurring some level of damage. Wind speeds during the April 2011 storm averaged 67 knots, which translates to a Beaufort number 11 using that wind speed measurement.

Additionally, sensitive populations such as the elderly or handicapped may be susceptible to hurricanes/severe storms/tropical storms when power is lost and life support systems run on electricity. If power is lost, some populations may need to be relocated to areas with power so that medical equipment can function. Additionally, limited mobility of some persons may make it difficult to relocate in general or in times of emergencies. The Town encourages neighbors to check on those neighbors who they may believe to be at risk during times of emergency. Emergency protocols for relocating sensitive populations are outlined in Wolcott's Local Emergency Operations Plan. In the future, Wolcott could map trouble spots on heavily traveled roads that reach sensitive populations in order to identify additional evacuation routes. Also, Wolcott can continue to provide outreach and education of the impacts of hurricanes/severe storms/tropical storms to these populations.

The following matrix provides an overview of the hazard:

<b>Hazard</b>	<b>Location</b>	<b>Vulnerability</b>	<b>Extent</b>	<b>Impact</b>	<b>Probability</b>
Hurricanes and Tropical Storms	Areas where flooding is commonly found, road network, near utility lines	Residential and commercial structures, infrastructure, riverbank erosion, power outages	Saffir-Simpson Scale Category 1, Beaufort Scale 8 or 9	\$0 - \$1 million	Unlikely –10% - 50% probability within the next year
Heavy Winds and Severe Storms	Areas where flooding is commonly found, road network, near utility lines	Residential and commercial structures, infrastructure, riverbank erosion, power outages	Beaufort Scale 8 or 9	\$5,000 - \$50,000 (based on past history)	Medium – 50% to 90% probability within the next year

### **3.3 Moderate Threat Hazards**

#### **Major Highway and Railroad Accidents**

Wolcott is bisected by one major State highway: VT Route 15, which serves as the region's major east-west trucking and transportation corridor. Motorists travel at high speeds on the state highway network, creating potentially dangerous intersections with local roadways. The threat of a major highway accident is an ever-present possibility in communities across the United

States. The only intersection identified by the town that has high potential for accidents is the VT Route 15 and North Wolcott Road intersection, due to the design of the intersection and the high rate of speed (posted speed limit is 50 MPH along much of Route 15). The Vermont Agency of Transportation (AOT) has identified the Elmore Pond Road as a high crash corridor. These two intersections are shown on the Transportation Concerns map. The threat of a major railroad accident is non-existent, as there are no active rail lines in Wolcott. Bridges with a federal sufficiency rating of less than 50 (out of 100) are also shown. Four (4) of the bridges in Wolcott have a federal sufficiency rating of less than 50.

The following matrix provides an overview of the hazard:

Hazard	Location	Vulnerability	Extent	Impact	Probability
Major Highway and Railway Accidents	Intersection of VT Route 15 and North Wolcott Rd, Elmore Pond Road	Risk of death, injury or property damage	38 crashes, 12 injuries and 1 fatality in 5 years (2009 - 2013)	\$0 - \$1 million	High: 90% - 100% probability of happening in the next year.

### Structure Fire

Structure fire is when a building is partially damaged or destroyed by a fire. According to data from the 2010 Census and Vermont Center for Geographic Information, there are 755 housing units within the town and approximately 44 commercial buildings. Housing units are typically built on multi-acre lots; however, homes in the village are more densely sited. The risk of large scale structure fires is moderate in Wolcott. The most significant risks involve the village areas and schools. Like most of Vermont homes, many residences use wood or pellet burning stoves for heat, which may increase the risk of a localized structure fire. In 2012 the Wolcott Fire Department responded to 5 chimney fires that did not involve structures. There were also 4 reported structure fires, of which the causes were not reported. The density and closeness of buildings and homes increases the likelihood of fire spreading from building to building. Mutual aid agreements with surrounding municipalities are in place to support larger-scale incidents.

*The extent of damage is incipient to growth stage, depending on the age of the structure and proximity to other structures. The impact of fire is relative to the age and size of the structure. Depending on when the fire is identified, the impacts may be minimal (minor smoke damage) to devastating (complete loss of structure and/or life).*

Hazard	Location	Vulnerability	Extent	Impact	Probability
Structure Fire	Village centers	Buildings	Historic homes and buildings in Wolcott Village located less than 10 feet from one another	\$0 - \$50,000	Likelihood of hazard occurring based upon past events: Medium: 50% to 90% probability of happening in the next year.

## Power Outage

One of the most common impacts of major natural disasters can be the prolonged loss of electricity, whether from localized damage to distribution systems or from remote impacts to generation and transmission facilities. Based on the rural character of the town and its concerns with transportation infrastructure in inclement weather, protracted loss of power could become a hazard unto itself, causing ramifications and impacts such as significantly endangering health and safety, substantial economic consequences, or causing stress and severe inconvenience to the town's residents and businesses. The shortage of energy and food supplies could threaten the welfare of the citizens of Wolcott. The dependency upon out of state sources can become a problem when normal deliveries are interrupted. The VT Department of Health and Lamoille County Sheriff's Department maintain a list of vulnerable populations who may require additional assistance during long term outages.

Major electric utility companies have active, ongoing programs to improve system reliability and protect facilities from damage by ice, severe winds and other hazards. Typically, these programs focus on trimming trees to prevent encroachment of overhead lines, strengthening vulnerable system components, protecting equipment from lightning strikes and placing new distribution lines underground. The Town may also reduce vulnerability to power outages by tree pruning along town highways.

Additionally, sensitive populations such as the elderly or handicapped may be susceptible to extreme temperatures when power is lost and heating systems are run on electricity (versus gas or natural fuels). If power is lost, some populations may need to be relocated to areas with power so that medical equipment can function. Additionally limited mobility of some persons may make it difficult to relocate in general or in times of emergencies. The Town encourages neighbors to check on those neighbors who they may believe to be at risk during times of emergency. The CARE program started by the United Way (Citizens Assistance Registry for Emergencies) is a self-reporting system for people who may need special assistance during an emergency. Residents are encouraged to sign up for this program if they need assistance. In the future, the Town can map the location of sensitive populations and trouble spots on roads that reach those populations in order to identify additional routes.

Hazard	Location	Vulnerability	Extent	Impact	Probability
Power Failure	Town wide	Human Health	Town wide	\$0 - \$50,000	Likelihood of hazard occurring based upon past events: Medium: 50% to 90% probability of happening in the next year.

## Drought

There are two types of drought: a short time drought lasts a few weeks or a couple of months. A long-term drought is if the weather or atmospheric circulation pattern becomes entrenched and

the precipitation deficit lasts for several months to several years. It is possible for a long-term drought to have wet spells and vice-versa.

Drought has occurred in almost every Lamoille County municipality, but it is generally limited to individual house wells or community wells serving a particular subdivision running dry in the heat of the summer. The local water table reached an all-time low during the nationwide drought of 1988; however, recovery was fairly rapid. The town has no public water reservoirs if private wells go dry. Drought poses risk to the entire community. There is an elevated risk of fire danger during periods of prolonged drought.

Droughts represent a hazard in late summer, when local spring and well levels are reduced to minimal flows. Traditionally, drought has not been a serious statewide concern in Vermont; it is a cyclical threat most recently occurring statewide in 2001. There are no recorded drought events for Lamoille County at the NCDC since January 1950, but dry weather struck Vermont in 1999, resulting in a significant drought that impacted farm ponds, reservoirs, and private and municipal water supplies. The drought was unusual because some parts of Vermont received enough rain to prevent total crop loss. Parts of the state had 18 days with temperatures above 90 degrees (approximately three times more than normal) and several consecutive months below average precipitation.

Dollar losses from droughts are not estimated to date but certain losses associated with the following could be investigated as such: the reduction in agricultural production; the cost to bring water to struggling farms; the construction of new community water supplies with better storage capability (such as groundwater supplies that tap water in natural storage); the replacement of surface supplies and springs by drilled wells during the drought period; and drilled wells that have been deepened to capture additional yield when sustainable yield drops during the drought period.

Drought is very hard to measure based on the number of disciplines affected by it as well as the geographical distribution of drought. Two indices have been developed to try and measure the extent of a drought: the Palmer Drought Index (PDI) and the Standardized Precipitation Index (SPI), which measures precipitation. The PDI measures drought based on the duration and intensity of drought-inducing circulation patterns. In 1999, the drought rated as “moderate” on the PDI across the Green Mountains, including all of Lamoille County, and “severe” in the Champlain Valley. While summer dry spells are common, Vermont is not considered to be highly vulnerable to a full-scale drought due to our abundant water supply.

<b>Hazard</b>	<b>Location</b>	<b>Vulnerability</b>	<b>Extent</b>	<b>Impact</b>	<b>Probability</b>
Drought	Town wide, with emphasis on agricultural operations	Agriculture Economic vitality	Based on the 1999 drought, a “moderate” Palmer Drought Index rating	Loss of crops and pasture, a shortage of food for livestock, potential lack of drinking water	Likelihood of hazard occurring based upon past events: Medium: 50% to 90% probability of happening in the next year.

## **4. Mitigation Strategy**

### **4.1 Hazard Mitigation Goals**

During the planning process, Wolcott’s hazard mitigation goals were reviewed and updated to reflect changes in the Town’s mitigation priorities based on the hazards, risks, and community vulnerability to each hazard. To this end, the Town of Wolcott supports the following hazard mitigation goals:

- Provide the technical support for, and aid in the development of implementation protection mechanisms at the local level that will serve to avoid land use investments that would be, over time, endangered by, incompatible or in conflict with fluvial adjustment and erosion processes, and landslides.
- To reduce injury and losses from the natural hazard of flash floods, flooding, and fluvial erosion; extreme cold, snow, and ice storm; severe storms, windstorms, hurricanes, and tropical storms; power outages; and other severe weather events.
- Ensure that emergency response services and critical facilities functions are not interrupted by natural hazards.
- Provide adequate communication systems for emergency personnel and response units to avoid loss of life and damage to property.
- Provide residents with adequate warning of potential hazards to avoid loss of life and damage to property.
- Encourage hazard mitigation planning as a part of the local planning process.
- Maximize use of FEMA hazard mitigation opportunities related to Public Assistance funded projects when available as a result of federally declared disasters.
- Follow disasters, for large and complex drainage and road repair projects, make “temporary fixes” to damaged infrastructure to address immediate emergency access and life safety considerations, to the extent practical, until consulting with FEMA to ensure compliance with state permitting and maximize hazard mitigation opportunities for Project Worksheets for permanent repairs.

### **4.2 Mitigation Actions, Strategies, Prioritization, and Implementation**

The mitigation strategies in Section 4.2.1 list specific, prioritized activities with more detail found in Appendices B and C. In Section 4.2.2 below, general or ongoing mitigation strategies and emergency preparedness activities are listed. This ongoing list is updated with each hazard mitigation plan. Within each strategy and action general details are provided about: local leadership, possible resources, implementation tools, and prioritization.

A major barrier to implementation of mitigation projects is funding. Vermont’s Division of Emergency Management & Homeland Security encourages a collaborative approach to achieving mitigation at the local level through partnerships with Vermont Agency of Natural Resources, VTrans, Vermont Agency of Commerce and Community Development, Regional Planning Commissions, FEMA Region 1, and others. That said, these agencies and organizations can work together to provide assistance and resources to towns interested in pursuing hazard mitigation projects. Local officials and property owners can always contact the State Hazard Mitigation Officer with questions, technical assistance, or to find out about grant opportunities:

Ray Doherty, State Hazard Mitigation Officer  
VT Division of Emergency Management & Homeland Security  
103 South Main Street  
Waterbury, VT 05671  
Tel (802) 241-5258 (office)  
Email: [ray.doherty@state.vt.us](mailto:ray.doherty@state.vt.us)

Federal grant opportunities for mitigation include the Hazard Mitigation Grant Program, Pre-Disaster Mitigation, Community Development Block Grants, and programs sponsored by the U.S. Department of Agriculture. State funding is available through VTrans (e.g. Better Backroads), ANR, and ACCD. Wolcott understands that in order to apply for FEMA funding for mitigation projects, the project must meet FEMA benefit-cost criteria. The town must also have a FEMA approved Hazard Mitigation Plan as well.

#### **4.2.1 Specific Hazard Mitigation Programs, Projects & Activities**

The Hazard Mitigation Advisory Committee reviewed the list of ongoing mitigation and emergency planning activities and strategies (see Section 4.2.2). The following list prioritized the top seven items for the next five year cycle. In Wolcott, the major concern is the impact of a serious flooding and/or snow or ice storm incident where power may be out and transportation routes to the town would be impacted, effectively leaving the general public and special needs populations at risk due to delayed response time. Partners involved in completing these projects are identified in parentheses following the description. To see how they were prioritized, see the matrix on page 34. For more on implementation, please see the table on page 35.

- Working with LCPC, explore the possibility of incorporating a fluvial erosion hazard overlay, based on mapped fluvial erosion corridors for the Elmore and Wild Branches, within the local zoning bylaws, to better protect life and property in town. Adopting a fluvial erosion corridor overlay would mitigate future losses from flooding and natural erosion, and help protect fragile and natural resources within stream corridors.

*Potential Funding Sources:* LCPC Emergency Management Performance Grant (EMPG), Municipal Planning Grant (MPG), and Vermont Department of Environmental Conservation “604b” grants.

- Further explore and develop mitigation projects along the Wild Branch and Lamoille Rivers that were identified in the River Corridor Reports. The fluvial geomorphology of the Wild Branch is volatile and the associated stream flow and sedimentation poses a hazard to landowners and transportation infrastructure on North Wolcott Road. Implementing riparian restoration and conservation projects would allow the rivers room to move and alleviate pressure on the areas currently constricted by existing development.

*Potential Funding Sources:* Vermont Agency of Natural Resources (ANR) Ecosystem Restoration grant program, Vermont Fish and Wildlife Watershed Grants program, Lamoille County Conservation District Trees for Streams program.

- Replace the undersized culvert on East Hill Road. East Hill Road is a sloping Class 3 highway that passes through a mixture of farms, forests and wetlands. The undersized culvert where “Wolcott Brook” passes under East Hill Road is a cause for concern. Rain and floodwaters flow down East Hill and fill the 36” culvert with sedimentation, causing frequent road washouts. Upstream beaver dams also contribute to frequent debris jams in this culvert. Using Ecosystem Restoration and Vermont Better Back Roads funding, an engineering study and final design for the culvert was completed in 2013. Wolcott hopes to secure a grant from the Vermont AOT Structures Grant program to fund the culvert replacement. Wolcott submitted a grant application in Spring 2014 but was denied; the town will keep applying for funding.

*Potential Funding Sources:* Vermont AOT Structures Grant program, HMGP

- Mitigate culverts, bridges, and road sections. As pieces of the transportation network are damaged by natural hazards, they may be eligible for FEMA 404 or 406 mitigation. Repeat projects may be eligible for FEMA’s Hazard Mitigation Grant Program (HMGP) to mitigate the problem and re-build the transportation network for greater resiliency. Specific culverts, bridges, and road sections will be identified as the need arises.

*Potential Funding Sources:* Vermont AOT Structures Grant program, HMGP

- Evaluate the feasibility of a municipal water system in the village. All Wolcott residents maintain private wells, which are regulated in the VT Dept. of Health (VDH). Within the village area, there is sufficient density to potentially support a municipal water system. There are numerous benefits to a municipal water system, including cost-certainty and more efficient land uses (due to not having to devote land to individual, on-site systems). From a hazard mitigation perspective, a municipal water system with storage reservoirs would create a stable water source, resistant to drought and other hazards that knock out electricity (ie: wind, ice and snow storm). The town has completed two prior studies to explore the possibility of a village water and sewer system (most recently in 2004), but in light of changing market conditions and new technologies, this issue requires further analysis. For example, the neighboring Town of Elmore recently received grant funding and passed a bond vote to install a municipal water system in a smaller village center.

*Potential Funding Source:* U.S. Department of Agriculture (USDA) water and wastewater development grants.

- Develop a plan to move the Fire Station and Town Garage out of the 500-Year Floodplain. Currently the Town has a plan during flood emergencies to move personnel and equipment from these structures to the Elementary School, located on higher ground, should the need arise. However, the Town realizes this is a less-than-ideal situation that hinders the capacities of the Highway Department and Fire Department to respond adequately during emergencies. The Town would be better served if these facilities were moved permanently out of harm’s way.

*Potential Funding Source:* LCPC Emergency Management Performance Grant (EMPG)

- To mitigate potential damage caused by winter storms, conduct educational outreach about snow loads for roofs. Consider regulatory measures such as a new zoning law requiring adequately pitched roofs for new construction.

*Potential Funding Sources:* LCPC Emergency Management Performance Grant (EMPG), FEMA Pre-disaster Mitigation Grant

- To mitigate potential damage from high winds, inspect and remove, if necessary, trees and/or limbs which endanger electrical lines during wind storms; in particular, dead or dying trees pose a hazard and should be removed.

*Potential Funding Sources:* LCPC Emergency Management Performance Grant (EMPG), FEMA Pre-Disaster Mitigation Grant

Ultimately, hazard mitigation priorities are determined by Wolcott's ability to finance and implement these activities within the town's existing tax base and available grants. While these seven projects were prioritized according to such criteria as responding to a significant hazards, likelihood of funding, and implementation timetable, unforeseen other project may arise requiring immediate attention. The seven prioritized projects were evaluated in the matrix in below, based on nine criteria and weighted on a scale of 1-5 (with 5 representing a rating of agreement).



## Wolcott Mitigation Action Prioritization Matrix

Rated on a scale of 1 – 5, with 5 being most favorable and 1 as least favorable.

Mitigation Action	Responds to significant hazard	Likelihood of funding	Protect threatened infra-structure	Implemented quickly	Socially / Politically acceptable	Technically Feasible	Administratively Realistic	Reasonable cost to benefit	Environmentally sound	TOTAL SCORE
Further explore and develop mitigation projects along the Wild Branch and Lamoille Rivers identified in the River Corridor Report.	4.5	3.5	4	3	5	4.5	3.5	3.5	5	36.5
Explore the possibility of incorporating a fluvial erosion hazard overlay for the Wild Branch and Elmore Branch within the local zoning bylaws, to better protect life and property in town.	4.5	4.5	4	4	3	5	4.5	4.5	5	39
Develop a plan to move the Fire Station and Town Garage out of the 500-Year Floodplain.	4.5	2	4	2	3	3	1	2	3.5	25
Replace the undersized culvert on East Hill Road	4	4	3.5	4.5	4	5	4.5	5	5	39.5
Conduct educational outreach about snow loads for roofs. Consider regulatory measures such as a new zoning law requiring adequately pitched roofs for new construction.	3	4	3	5	4	4	4	4	5	36
Inspect and remove, if necessary, trees and/or limbs which endanger electrical lines and the road network during wind storms or ice storms.	5	3	5	4	4	5	4	5	4	39
Evaluate the feasibility of a municipal water system in the Village.	4	3.5	3.5	2	5	4	4	5	4.5	35.5

<b>WOLCOTT MITIGATION ACTIONS</b>	<b>WHO (LEADERSHIP)</b>	<b>WHEN (DEADLINE)</b>	<b>HOW (FUNDING SOURCE)</b>	<b>HAZARD BEING MITIGATED</b>
Further explore and develop mitigation projects along the Wild Branch and Lamoille Rivers that were identified in the River Corridor Report.	LCPC; Wolcott Selectboard; Wolcott Planning Commission	2018	Vermont Agency of Natural Resources, Lake Champlain Basin Program	Flood, Erosion
Working with LCPC, explore the possibility of incorporating a fluvial erosion hazard overlay – based on map fluvial erosion zones for the Elmore and Wild Branches– within the local zoning bylaws, to better protect life and property in town.	LCPC; Wolcott Planning Commission	2016	LCPC/Emergency Management Performance Grant	Flood, Erosion
Develop a plan to move the Fire Station and Town Garage out of the 500-Year Floodplain.	Wolcott Selectboard; Road Foreman	2020	LCPC/Emergency Management Performance Grant	Flood, Erosion
Replace the undersized culvert on East Hill Road	Wolcott Selectboard; LCPC	2016	Vermont AOT Structures Grant	Flood, Erosion
Conduct educational outreach about snow loads for roofs. Consider regulatory measures such as a new zoning law requiring adequately pitched roofs for new construction.	LCPC; Wolcott Planning Commission, Wolcott Selectboard	2017	LCPC/Emergency Management Performance Grant	Winter Storm
Inspect and remove, if necessary, trees and/or limbs which endanger electrical lines and the road network during wind storms or ice storms.	Wolcott Selectboard; Utility Companies; Road Foreman	2016	FEMA Pre-Disaster Mitigation Grant	Snow, Ice, Wind Storm
Evaluate the feasibility of a municipal water system in the Village.	Wolcott Selectboard; LCPC	2019	US Department of Agriculture	Drought, Power Failure
Mitigate damaged culverts, bridges, and road networks as needed.	Wolcott Selectboard, Road Foreman	As needed	HMGP, 404 Mitigation/ Public Assistance	All hazards

## 4.2.2 Ongoing Hazard Mitigation and Emergency Preparedness Strategies & Activities

### Planning Activities

- Adopt and maintain a Local Emergency Operations Plan (LEOP). *Completed. The town last adopted a LEOP in May 2014, which it will update annually after Town Meeting in March 2015.*
- Emergency Response and Management staff attendance at professional training sessions. *Complete. The Wolcott Selectboard signed a resolution of compliance with the National Incident Management System (NIMS) in 2010, which includes a commitment to take FEMA Incident Command System (ICS) training. The Wolcott EMD has attended multiple ICS trainings in recent years. Members of the Selectboard have also taken ICS 100.*
- Participation at Local Emergency Planning Committee (LEPC) meetings and activities. *Completed. The Wolcott EMD frequently participates in the LEPC in recent years.*
- Support of mission and maintains members in the Lamoille County Community Emergency Response Team (CERT). *Deferred. The Lamoille County CERT has not been active locally and there does not appear to be additional interest within town.*
- Ensure procedures are in place for rapid evacuation of essential facilities. *Completed. Residents of Wolcott village were briefly evacuated as a precautionary measure during Tropical Storm Irene. Evacuees were temporarily sheltered at the Elementary School and returned to their homes. Evacuations are coordinated by the Wolcott EMD, Fire Department and Lamoille County Sheriff's Department.*
- Integrate additional mitigation measures in local land use planning and ordinance development processes. *In progress. The Wolcott Planning Commission most recently adopted the Town Plan in April 2013. The Planning Commission and interested members of the Selectboard re-examined and integrated mitigation priorities in the context of land use and emergency planning. The Planning Commission recently applied for a Municipal Planning Grant to update its Zoning and Subdivision Regulations. This update will include the Flood Hazard Regulations.*
- The Town Plan was last adopted in 2013. In accordance with Vermont planning statute, the updated Plan contains a land use element that addresses hazard mitigation issues including floodplain storage and stormwater, among others.

### Financial and Tax Incentives

- Annual investment of local tax dollars in highway mitigation projects. *In Progress. The town budgets road, bridge, and culvert investments in the annual highway budget.*
- Use of State and Federal funding for mitigation projects and activities. *In Progress. In 2006, Wolcott received a grant from the Agency of Natural Resources (ANR) Better Back Roads Program to design drainage improvements on Sand Hill Rd and Baldwin Brook Road. Wolcott has also received two grants from the Dry Hydrant Program, which is funded by the State of Vermont and U.S. Forest Service and administered by the Vermont Rural Fire Protection Task Force and the Northern Vermont and George D. Aiken Resource Conservation and Development Councils. Wolcott also received a grant (Generator Grant Program) to obtain a new generator for the EOC, as well as a grant (E\_Equipment Grant) to purchase new radios for the Emergency Management Director.*

### Hazard Control and Protective Works

- Highway Maintenance Programs (culvert survey & replacement, ditching along roadways, cutting vegetation to allow visibility at intersections). *In Progress. Maintenance priorities are dictated by local needs and budget considerations. Wolcott consistently applies for grants from the Vermont Agency of Transportation (AOT).*
- Adopt the revised Vermont Agency of Transportation recommended Codes and Standards for town highways. *Wolcott adopted the revised Codes and Standards in January 2013. These standards have additional provisions to ensure investments in town highways are protected with proper drainage, ditching and construction techniques.*
- Update the existing culvert inventory and produce a map showing culvert size and condition. *Completed. In 2013 LCPC conducted a culvert inventory following VTrans approved protocol. LCPC followed up this inventory with a Capital Budget Planning Study that identified undersized and failing culverts and provided rough cost estimates of replacing these structures.*

### Insurance Programs

- Participation in NFIP. *In Progress. Wolcott is currently enrolled in NFIP, but will review its flood hazard regulations– which are incorporated within the zoning and subdivision bylaws – to ensure continued compliance and maximum protection to life and property. At a meeting with LCPC staff in 2011, the Wolcott Planning Commission suggested that the mapping and identification of riparian buffer areas and fluvial erosion corridors are priorities for future updates.*

### Protection/Retrofit of Infrastructure and Critical Facilities

- Mapping of Critical and Essential Facilities. *Completed. LCPC updates the Lamoille County critical facilities database on an ongoing basis.*

### Public Awareness, Training & Education

- Hazard Identification and Mapping. *Completed as part of the development of this plan. Since the first plan iteration, the disaster/declaration and response process has informed Town operations and the general public concerning the need for infrastructure and systems evaluation, monitoring and documentation especially as related to floods, winter storms, and power outages. This process will continue as public discussion, input and funding options for hazard mitigation projects are brought forward to the Selectboard. Additionally, all local and regional partners will use disaster events as a trigger to evaluate and improve the efficacy of this plan and necessary mitigation efforts.*
- Enhance public education and outreach regarding the National Flood Insurance Program. *In progress. In the aftermath of the unprecedented flooding of 2011, there is a renewed interest throughout the state in promoting NFIP. As part of its most recent Town Plan update, the Wolcott Planning Commission held a community meeting on flood hazard mitigation. Representatives from the Vermont Floodplain and River Management Program presented information about NFIP and FEH (Fluvial Erosion Hazard) programs. LCPC will continue to work with the Wolcott Planning Commission on flood hazard outreach in the coming year.*
- Conduct HAZMAT Drills involving all elements of the community to practice procedures associated with a simulated HAZMAT incident (LEPC, RPC, EMD, FD). *In*

*progress. Drills will be an ongoing function of the LEPC during this planning cycle. In addition, the Fire Department recently conducted a HAZMAT drill.*

- *Distribute FireWise information during peak wild fire season. Deferred. LCPC has previously assisted communities with wild fire protection planning and is available to work with the town on disseminating this information during future wildfire seasons.*

#### Public Protection

- *Designated and certify emergency shelters with the American Red Cross. Completed. In 2010, the town worked with LCPC and a representative from the Red Cross to execute shelter agreements for the Town Clerk's Office and Mennonite School. The town also has a pre-existing shelter agreement for the Wolcott Elementary School. All three shelters were inspected in 2013.*
- *Hazard Vulnerability Assessments. Completed as part of this planning process.*

#### Science and Technology

- *Stream Geomorphic Assessments to identify flood and erosion hazards as well as mitigation strategies that address those hazards. In Progress. Five rivers corridors in town have undergone various stages of assessment. Assessments are classified as either Phase 1 or Phase 2. A Phase 1 assessment consists of a remote analysis, identifying potential sites and issues that would benefit from further field study. Accordingly, Phase 2 includes field assessments of issues identified through the Phase 1 process, or other field observation.*
  - *Elmore Branch and Wild Branch– Phase 1, Phase 2 and River Corridor Management Plan was completed. Mapped fluvial erosion corridors for these branches have been produced by the VT Department of Environmental Conservation.*
  - *Lamoille River Mainstem– Phase 1 and Phase 2 fieldwork and report were completed in 2006. A river corridor management plan, project identification and municipal outreach was completed in 2010.*
  - *Green River and Elmore Pond Brook– Phase One fieldwork and data collection was completed for both streams. A Phase 1 Report was completed for the Green River and is scheduled to be completed for the Elmore Pond Brook as budgeting permits. A phase 2 (in-stream study) is not recommended due to the stability of both streams.*

### **4.3 Integration of the mitigation plan into other planning mechanisms**

For this hazard mitigation plan to be truly effective, it cannot stand on its own. The mitigation plan will be incorporated with other planning mechanisms, specifically the municipal plan, zoning and flood hazard regulations, and capital budgeting. As LCPC works with the Wolcott Planning Commission during a flood hazard bylaw update, LCPC will assist the Planning Commission with incorporating fluvial erosion hazard (FEH) areas. LCPC will also work with the Town to implement mitigation projects and strategies described in the river corridor plans.

Like hazard mitigation plans, municipal plans are updated every 5-years and Wolcott most recently adopted its plan April 3, 2013. Hazard mitigation planning and policies are incorporated into the Wolcott municipal plan, as evidenced by the following goals and objectives:

- Ensure that development does not create a hazard for the residents of the property or public at large. For example, the roads should be safe for cars and pedestrians, the water and air should be kept clean, development should avoid flood hazard areas and should occur on soils suitable for the type of construction proposed, and hazardous materials should be stored and used in a manner that does not pose a risk.
- Residential development is not permitted in the flood hazard area and existing housing in the floodplain should be flood-proofed for the safety of the residents and the town as a whole. Likewise, no development should occur in fluvial erosion hazard areas.
- The Town strongly encourages that existing structures within the 500-year floodplain be protected against flood damage.
- The Town should develop in a way that respects environmental limits, protects the high quality built and natural environment of the Town, and minimizes flood risk.
- Develop and update Wolcott's Flood Hazard Regulations, in conformance with the standards recommended by the Vermont Agency of Natural Resources. In conjunction with this, relocate the Fire Station out of the flood hazard zone.
- The town should consider, through grants and/or partnerships with interested organizations, purchasing structures within flood hazard areas to assist property owners relocation out of the flood plain.
- The planning commission should consider creating a plan for flood and erosion hazard areas to address recreational opportunities, flood hazard protection, and the potential for implementation of water quality measures.
- To preserve and protect wetlands from pollution, filling and any other uses of activities that will result in their degradation or a reduction in its capacity to provide wildlife habitat, flood control and water storage
- Silvicultural, agricultural and recreational activities are acceptable uses within the floodplain and should be encouraged. To maintain the quality and quantity of local groundwater supplies
- To maintain and , where degraded, improve the water quality across the town
- For Wolcott to have a well trained and funded fire, police and rescue service to provide a safe environment in which to work, live and play
- Explore ways to locally ensure the safety of private water impoundments below the state regulation threshold of 500,000 cubic feet.
- All bridges and culverts should be built to standards recommended by the Better Backroads program of the Vermont Agency of Natural Resources' Ecosystem Restoration Program initiative to ensure minimal impacts on rivers and streams and to prevent failure in the event of flooding.

## **Appendix A. Supplemental Maps**

Floodplain Map

Areas of Local Concern Map

Transportation Concerns Map

Critical Facilities Map

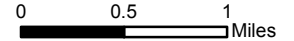
# FLOODPLAIN MAP

## TOWN OF WOLCOTT

For planning purposes only.  
Not for regulatory interpretation.

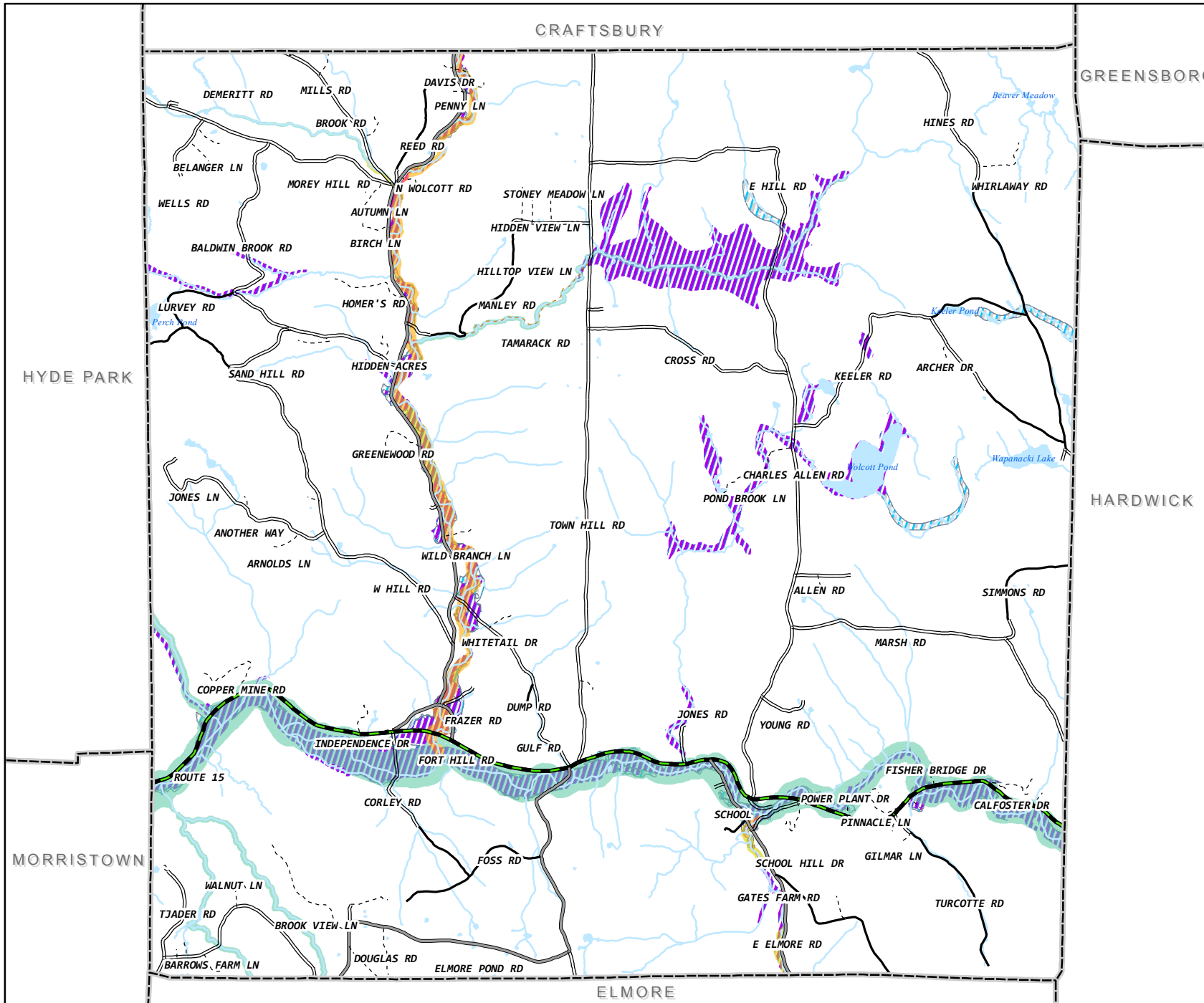
Traverse Mercator,  
VT State Plane,  
Meters, NAD83.

Lamoille County  
Planning Commission  
PO Box 1637, 52 Portland Street  
Morrisville, VT 05661  
802.888.4548 f 802.888.6938  
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### Legend

- RIVER CORRIDOR FEH RATING**
- Extreme
  - Very High
  - High
  - Moderate
  - Low
  - Very Low
  - Not Rated
- 100-YEAR FLOOD ZONE (SFHA)**
- 500-YEAR FLOOD ZONE**



Data Sources:

Structures: ESite database, Vermont Enhanced 911 Board, 2014.  
100-Year and 500-Year Flood Zones: Digital Flood Insurance Rate Map (DFIRM), FEMA, 2000. Floodplains for planning purposes only.  
River Corridor/Fluvial Erosion Hazard Areas: LCPC and VT ANR River Management, various dates. Much FEH boundary data is based on partial stream assessments and therefore is preliminary in nature.



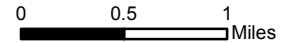
# STRUCTURES VULNERABLE TO FLOODING

## TOWN OF WOLCOTT

For planning purposes only.  
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Traverse Mercator,  
VT State Plane,  
Meters, NAD83.

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Morrisville, VT 05661  
802.888.4548 f 802.888.6938  
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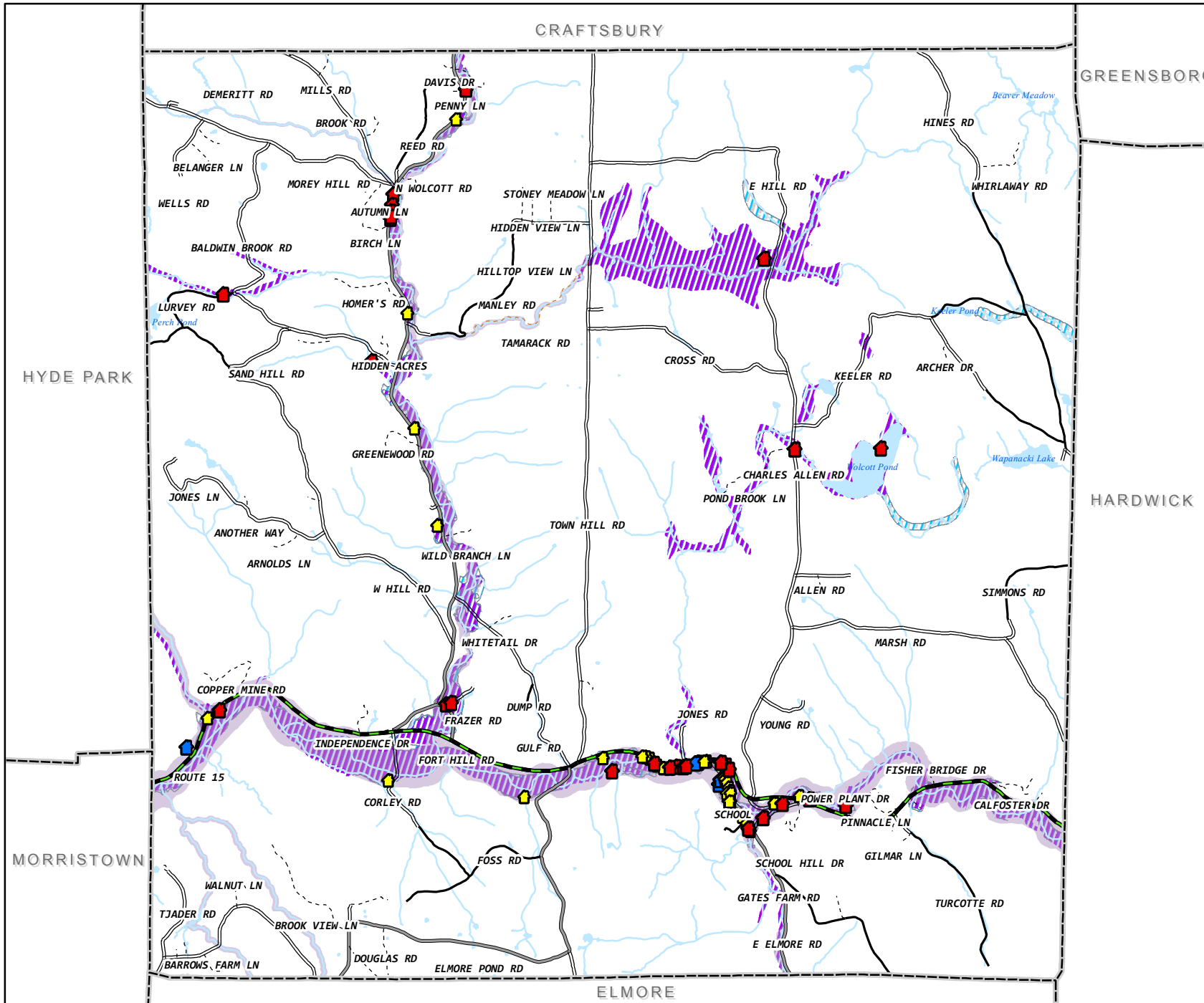


### Legend

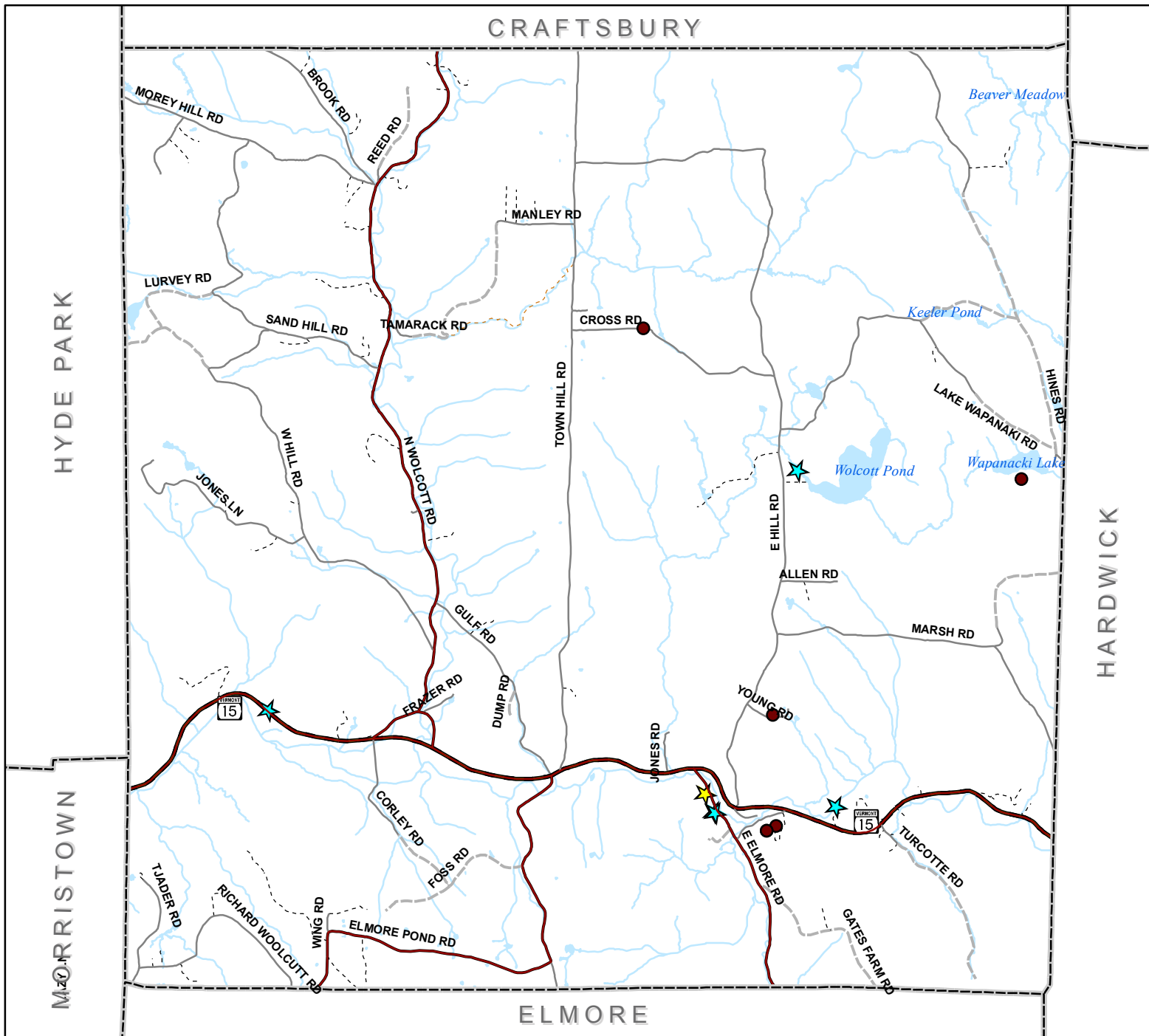
- STRUCTURES IN 100-YEAR FLOOD ZONE
- STRUCTURES IN 500-YEAR FLOOD ZONE
- STRUCTURES IN FEH
- RIVER CORRIDOR
- 100-YEAR FLOOD ZONE (SFHA)
- 500-YEAR FLOOD ZONE

Data Sources:

Structures: ESite database, Vermont Enhanced 911 Board, 2014.  
100-Year and 500-Year Flood Zones: Digital Flood Insurance Rate Map (DFIRM), FEMA, 2000. Floodplains for planning purposes only.  
River Corridor/Fluvial Erosion Hazard Areas: LCPC and VT ANR River Management, various dates. Much FEH boundary data is based on partial stream assessments and therefore is preliminary in nature.



# AREAS OF LOCAL CONCERN TOWN OF WOLCOTT



For planning purposes only.  
Not for regulatory interpretation.

Traverse Mercator,  
VT State Plane,  
Meters, NAD83.

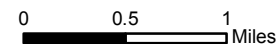
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## Legend

### CRITICAL FACILITIES THAT ARE IMPACTED BY:

- Not Impacted by a
- ★ 1 Known
- ★ 2 Known
- ★ 3 Known

\* Known Hazards are being within the 100-Year Floodplain, 500' of a major road or 1000' of Tier II site.



#### Data Sources:

AREAS OF LOCAL CONCERN: LCPC, 2014. TIER II sites data derived from Tier II data sheets, 2012.

ROADS: 1:5000 E-911 Road Data, 2014.

POLITICAL BOUNDARIES: 1:24000 USGS Quadrangles, VCGI, 1991.

SURFACE WATER: On-screen digitized from 1:5000 digital orthophotos using USGS 7 1/2' quadrangles and 1:20000 color infrared aerial photography as additional source material, VCGI for VHD-USGS, 2001

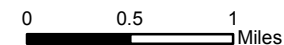
# TRANSPORTATION CONCERNS

## TOWN OF WOLCOTT

For planning purposes only.  
Not for regulatory interpretation.

Traverse Mercator,  
VT State Plane,  
Meters, NAD83.

Lamoille County  
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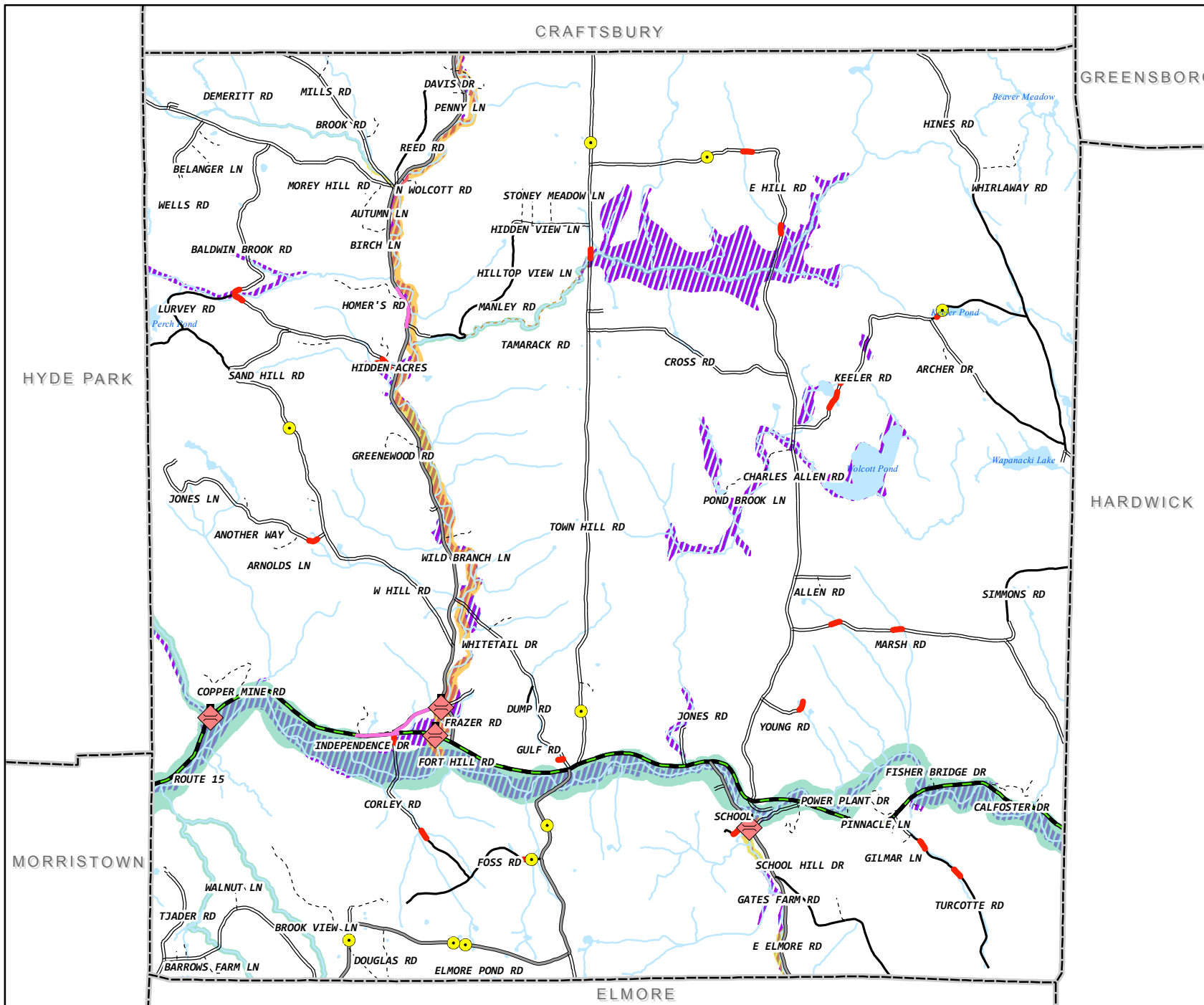


### Legend

- CRITICAL CULVERTS
- BRIDGE WITH FEDERAL SUFFICIENCY RATING LESS THAN 50 (OUT OF 100)
- HIGH ACCIDENT LOCATION
- HIGH ROAD EROSION RISK
- RIVER CORRIDOR FEH RATING**
  - Extreme
  - Very High
  - High
  - Moderate
  - Low
  - Very Low
  - Not Rated
- SPECIAL FLOOD HAZARD AREA

Data Sources:

Bridge Federal Sufficiency Ratings: VTrans, 2009  
Critical Culverts: Culverts rated as "critical" or "urgent" in 2013 inventory conducted by LCPC.  
High Accident Locations: VTrans, 2013.  
Flood Hazard Areas: Digital Flood Insurance Rate Map (DFIRM), FEMA, 2006. Floodplains for planning purposes only.  
River Corridor/Fluvial Erosion Hazard Areas: LCPC and VT ANR River Management, various dates. Much FEH boundary data is based on partial stream assessments and therefore is preliminary in nature.  
High Road Erosion Risk: Derived from 2014 statewide GIS analysis using soils, slope, and proximity to surface waters.



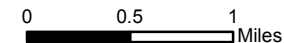
# CRITICAL FACILITIES

## TOWN OF WOLCOTT

For planning purposes only.  
Not for regulatory interpretation.

Traverse Mercator,  
VT State Plane,  
Meters, NAD83.

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### Legend

- EHS FACILITIES
- TIER II FACILITIES
- CRITICAL FACILITIES**
- Agriculture, Food, & Livestock
- Banking & Finance
- Education
- Emergency Response & Law Enforcement
- Energy
- Government & Military
- Health & Medical
- Information & Communication
- Transportation Facilities
- Water Supply & Treatment

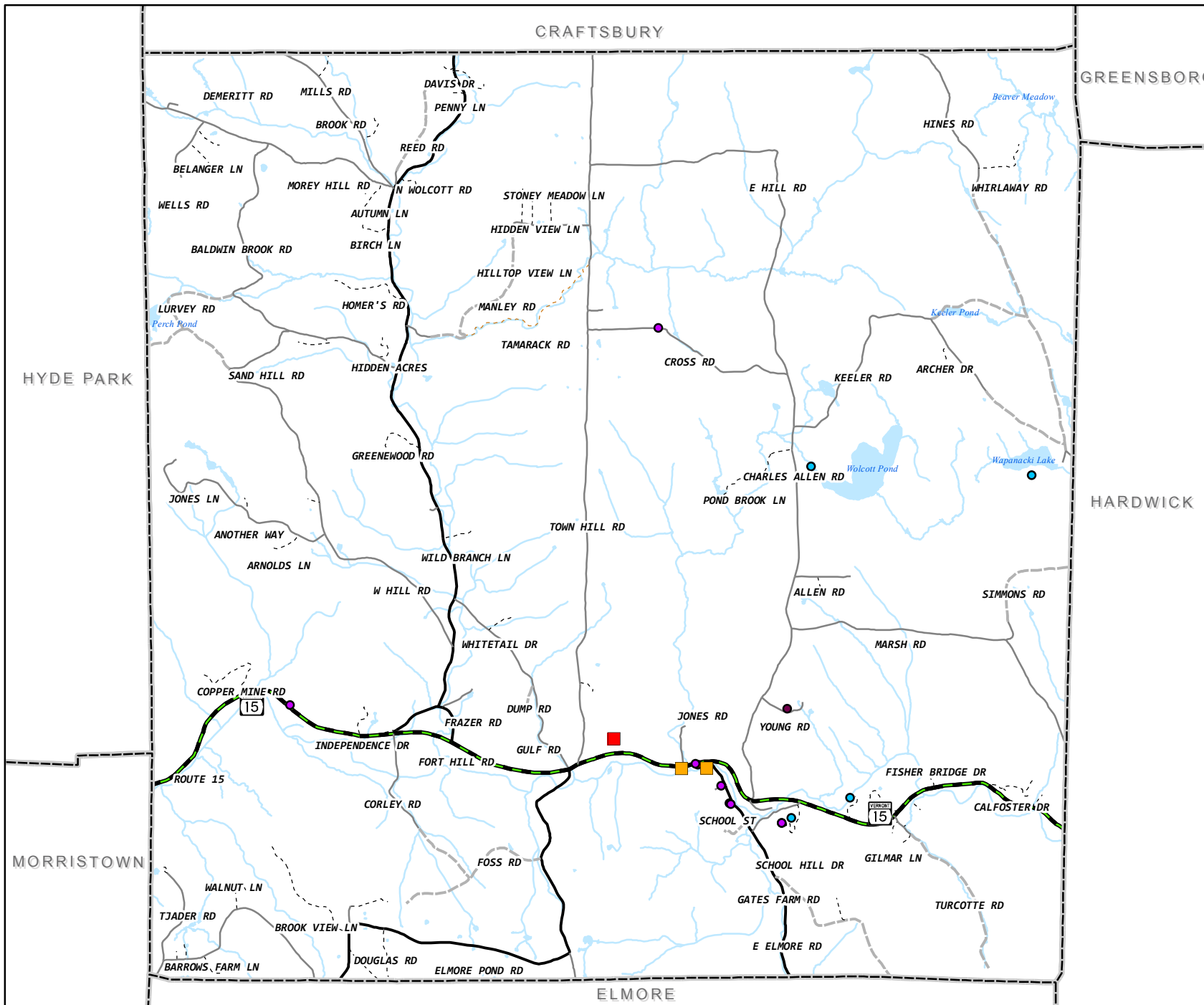
Data Sources:

CRITICAL FACILITIES, TIER II and EHS FACILITIES: DEMHS, 2011.

ROADS: 1:5000 E-911 Road Data, 2014.

POLITICAL BOUNDARIES: 1:24000 USGS Quadrangles, VCGI, 1991.

SURFACE WATER: On-screen digitized from 1:5000 digital orthophotos using USGS 7 1/2' quadrangles and 1:20000 color infrared aerial photography as additional source material, VCGI for VHD-USGS,



# ARE YOU PREPARED?



## HOW WELL IS YOUR COMMUNITY PREPARED?

Please join the Lamoille County Planning Commission to discuss updates to the

## Wolcott Hazard Mitigation Plan

WHAT IS HAZARD MITIGATION?  
WHY IS HAZARD MITIGATION PLANNING IMPORTANT?  
WHAT ARE THE HAZARDS IN YOUR COMMUNITY?

**WEDNESDAY, OCTOBER 8th at 2:30 pm**  
**WOLCOTT MUNICIPAL OFFICE BUILDING**

A successful plan needs widespread community input. Please join LCPC in an open discussion on the hazards in your community.

For more information please contact Melinda Scott at 888-4548.

## Melinda Scott

---

**From:** Melinda Scott  
**Sent:** Wednesday, October 01, 2014 2:33 PM  
**To:** 'Linda'  
**Subject:** Wolcott Hazard Mitigation Plan  
**Attachments:** Meeting Announcement.pdf; Lamoille County HM Plan\_Wolcott annex\_02 19 2014.pdf

Hi Linda,

Thanks for helping to set up a meeting for next Wednesday regarding the Hazard Mitigation Plan. Attached is a flyer and the latest adopted Wolcott HMP. Could you please post the meeting announcement at the Town Office, the Town website and on Front Porch Forum? I attached the Plan to give you an idea of what we're aiming for. The purpose of the update is to make the Plan standalone, as opposed to an annex to the Lamoille County Plan, and to incorporate the new flood resilience component requirement.

Best,  
Melinda

Melinda Scott, GIS Planner  
Lamoille County Planning Commission  
PO Box 1637, 52 Portland Street  
Morrisville, VT 05661  
(802) 888-4548  
[melinda@lpcvt.org](mailto:melinda@lpcvt.org)

## Melinda Scott

---

**From:** Bonnie Waninger  
**Sent:** Thursday, October 02, 2014 7:58 PM  
**To:** Taylar Foster; Meghan Rodier; Rob Moore; Melinda Scott  
**Subject:** Fwd: Wolcott Front Porch Forum No. 125 - haz mit plan

For the person who is assisting Wolcott with its haz mit plan...please see article

Sent from my iPad

Begin forwarded message:

**From:** Front Porch Forum <[wolcott@frontporchforum.com](mailto:wolcott@frontporchforum.com)>  
**Date:** October 2, 2014 at 4:50:37 PM EDT  
**To:** <[bonnie@lpcvt.org](mailto:bonnie@lpcvt.org)>  
**Subject:** Wolcott Front Porch Forum No. 125  
**Reply-To:** Front Porch Forum <[wolcott@frontporchforum.com](mailto:wolcott@frontporchforum.com)>



POST A NOTE TO YOUR NEIGHBORS

ISSUE NO. 125  
OCTOBER 2, 2014

## Wolcott Neighborhood Forum

### Overhead Projector Wanted

PATRICIA LYON-SURREY – DOUGLAS ROAD

### Community Meeting

LINDA MARTIN – TOWN CLERK, WOLCOTT

### Volunteer Drivers Needed

TAWNYA KRISTEN – COMMUNITY RELATIONS MNGR., GMTA

### LEDC Workshop on Innovation in Small Business

JOHN MANDEVILLE – EXECUTIVE DIRECTOR, LAMOILLE ECONOMIC DEVELOPMENT CORPORATION

### News from Neighboring FPFs

POSTINGS FROM: HYDE PARK, MORRISVILLE, HARDWICK WALDEN, CRAFTSBURY

Find what you needed on FPF? Please add your support: <http://frontporchforum.com/supporting-members>

## Front Porch Forum brought to you this week by...

### [LOCALS-RECEIVE 20% OFF YOUR 2014/15 STOWE SEASON PASS WITH THE LaWa PASS](#)

Lamoille/Washington County Season Access. Stowe 7 and Stowe 5 passes on sale now. LaWa pass prices go up Nov 2, 2014. Must show full-time residency in Lamoille or Washington County, VT. Click for details.

<http://porch.ly/StowePass/1069/>

### [PEOPLE'S CLIMATE MARCH REPORT-BACK/HOMECOMING PARTY OCT. 3](#)

Join the gathering Oct. 3, 7-11pm, Labor Hall in Barre. Live music, food, drink.  
Also, come to People's Forums on Human Rights & the Economy: Oct. 7-16 across VT. Hear candidates' visions for people & planet. Details:

<http://porch.ly/350VTMarch2014/1085/>

### [RED CROSS BLOOD DRIVE AT THE UNIVERSITY MALL ON OCTOBER 11TH](#)

Each pint of blood you give has the potential to save three lives. Come give blood at the Mall in the Sears Center Court seating area. Saturday, Oct. 11, 10:30am-4:00pm. Check our daily deals online. Shop for what you want.

<http://porch.ly/UMALL-BloodDrive/1079/>

## [Advertise on Front Porch Forum](#)



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## Overhead Projector Wanted

PATRICIA LYON-SURREY, [PMLYON@JUNO.COM](mailto:PMLYON@JUNO.COM), DOUGLAS ROAD

I am looking to do some silhouettete photography and need an old fashioned overhead projector. I know there must be many of them hanging around in school basements or other places. Let me know if you have one that I can have for free or for a minimal price. Thanks. [pmylon@juno.com](mailto:pmylon@juno.com)

[EMAIL AUTHOR](#) [REPLY TO FORUM](#)

## Community Meeting

LINDA MARTIN, [WOLCOTT@PSHIFT.COM](mailto:WOLCOTT@PSHIFT.COM), TOWN CLERK, WOLCOTT

Event: Oct 8, 2014

HOW WELL IS OUR COMMUNITY PREPARED? Please join the Lamoille County Planning Commission and town officials to discuss updates to the Wolcott Hazard Mitigation Plan on Wednesday, October 8th at 2:30 pm at the Wolcott Municipal Office Building. A successful plan needs widespread community input.

[EMAIL AUTHOR](#) [REPLY TO FORUM](#)

## Volunteer Drivers Needed

TAWNYA KRISTEN, [TKRISTEN@GMTARIDE.ORG](mailto:TKRISTEN@GMTARIDE.ORG), COMMUNITY RELATIONS MNGR., GMTA

The Green Mountain Transit Agency (GMTA) is currently in need of volunteer drivers to provide rides for those in your community needing access to health care, meal site, senior center and daily needs. GMTA Volunteer Drivers are able to design their own schedule based on availability, are reimbursed for the miles they drive and provide a vital service for those in their community. Whether you can volunteer just a few hours or each day of the week, you will be providing your neighbor an essential connection to independence and well-being. Please fill out an application at [gmtaride.org/volunteer-driver-program](http://gmtaride.org/volunteer-driver-program) or give us a call at our Washington County office 802.223-7287 or our Franklin County office 802.527.2181.

[EMAIL AUTHOR](#) [REPLY TO FORUM](#)

## LEDC Workshop on Innovation in Small Business

JOHN MANDEVILLE, [JOHN@LAMOILLEECONOMY.ORG](mailto:JOHN@LAMOILLEECONOMY.ORG), EXECUTIVE DIRECTOR, LAMOILLE ECONOMIC DEVELOPMENT CORPORATION

LEDC SPONSORING WORKSHOP ON INNOVATION IN SMALL BUSINESS: KEEPING YOUR BUSINESS ON THE CUTTING EDGE Morrisville – “If you’re not Meaningfully Unique, you better be cheap!” That’s one of the mantras of a



## Melinda Scott

---

**From:** Melinda Scott  
**Sent:** Friday, October 17, 2014 2:52 PM  
**To:** 'Linda'; br24bubblestrait@aol.com; 'Ryan, Jim'; Brian Lima; arlosterner@myfairpoint.net; toddrharris@yahoo.com; bulletbarre@aol.com; dan@streambanks.org; jeremy fosterfell@gmail.com; wolcottfirechief@vmlink.net; maxfieldenglish@gmail.com  
**Cc:** Taylor Foster  
**Subject:** RE: Hazard Mitigation Plan  
**Attachments:** Lamoille County HM PlanUpdate\_Wolcott\_FirstReviewDraft.pdf; Prioritization Matrix.docx

Hello all,

Attached is a draft of the Wolcott Hazard Mitigation Plan update. Please review and provide any feedback or comments to me by October 31. I have also attached a Prioritization Matrix where I would like you to rank the proposed mitigation actions (5 = Excellent 4 = Good 3 = Average 2 = below average (or unknown) 1 = poor) for each project in terms of how well the project mitigates the hazard, likelihood of funding, how well the project protects threatened infrastructure, time to implement, social and political acceptance, technical feasibility, practicalness, reasonable cost to benefit, and whether the project is environmentally sound. I appreciate you taking the time to review the Plan, your input is valuable. If you have any questions, please feel free to contact me.

Best regards,  
Melinda

Melinda Scott, GIS Planner  
Lamoille County Planning Commission  
PO Box 1637, 52 Portland Street  
Morrisville, VT 05661  
(802) 888-4548  
[melinda@lpcvt.org](mailto:melinda@lpcvt.org)

---

**From:** Melinda Scott  
**Sent:** Friday, October 10, 2014 12:59 PM  
**To:** 'Linda'; [br24bubblestrait@aol.com](mailto:br24bubblestrait@aol.com); Ryan, Jim; Brian Lima  
**Subject:** Hazard Mitigation Meeting Minutes

Hello all,

Attached are the minutes from the Hazard Mitigation Planning meeting held the other day. Thank you all for participating, I think it was a productive meeting and will be very helpful as I prepare the draft update. I will send the draft along by middle of next week.

Best,  
Melinda

Melinda Scott, GIS Planner  
Lamoille County Planning Commission  
PO Box 1637, 52 Portland Street  
Morrisville, VT 05661  
(802) 888-4548  
[melinda@lpcvt.org](mailto:melinda@lpcvt.org)